Illustrated Lectures

ON

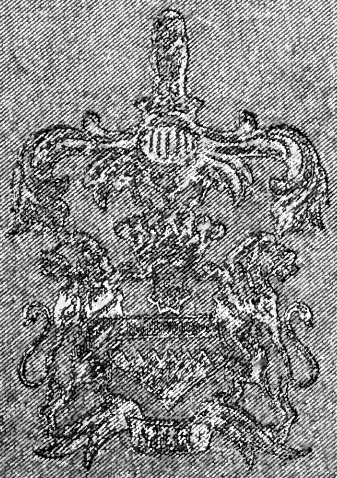
HORSEMANSHIP

BY

Ernst Carl von Eilmann

As delivered at the Riding Academy

SEASON 1898



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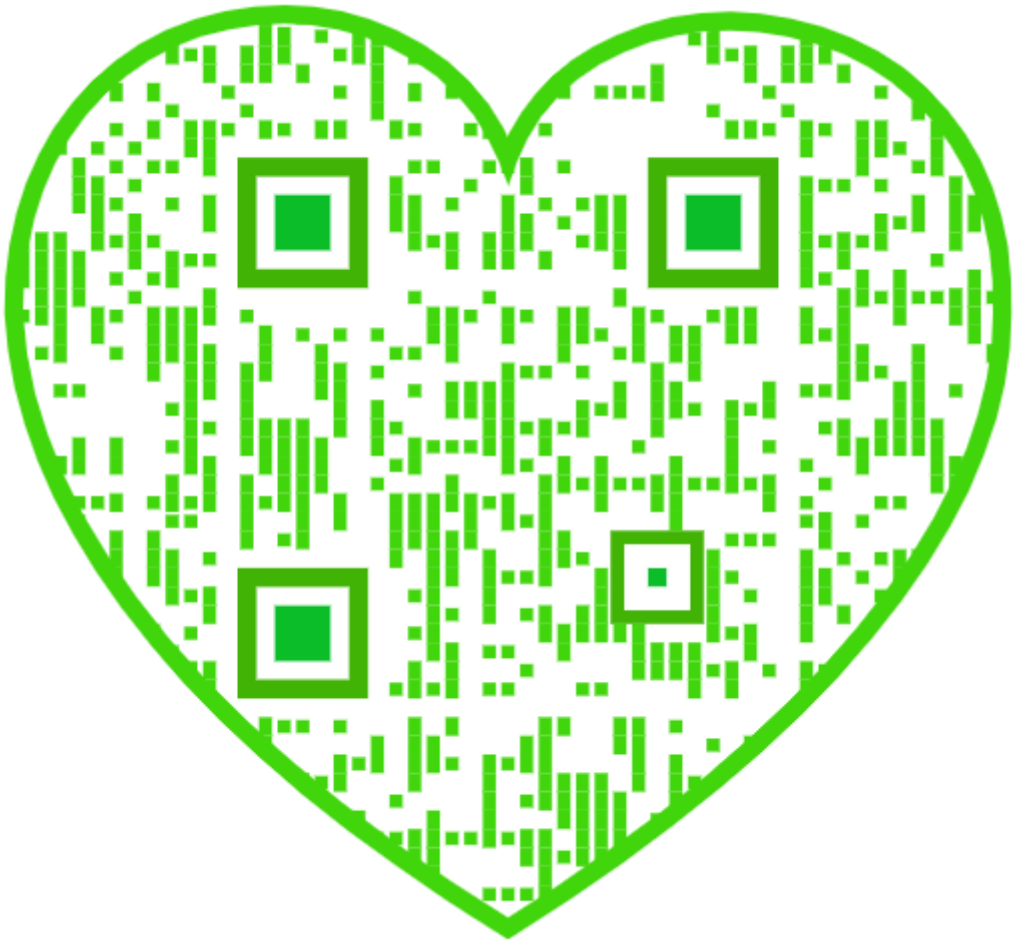

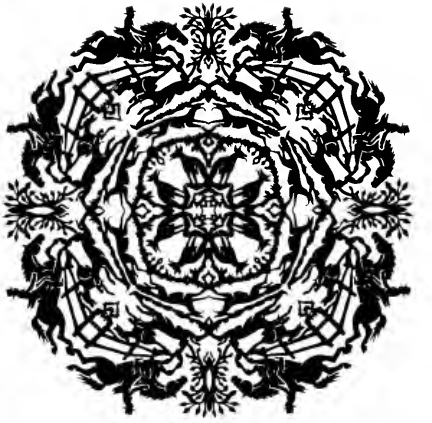

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As delivered at the Dickel Riding Academy

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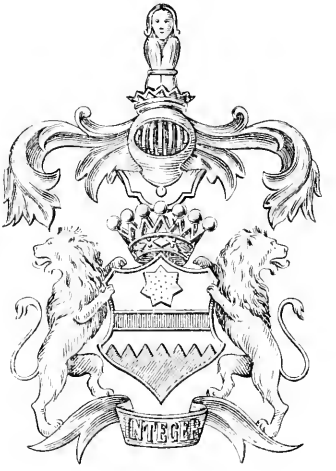

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Lecture I.

THE ART OF RIDING.

Origin, developement and useful application.

Communications to the educated world, by Ernst Carl von Gillmann.

PREFACE.

In all branches of human science and strife, it is of great importance, to search for the origin of what we recognize as being a weighty factor in the evolution of the universe.

An original idea, which in the course of centuries has given rise to mighty facts,has often lain dormant in the chaos of changing times and circumstances, because the general tide of affairs prevented its growth.

The human mind often requires an incentive to awaken its innate vigor to consciousness, and only then does it ascend on the wings of knowledge, to the creation of all things beautiful and great, in honor of itself and for the benefit of humanity.

"Let there be light!" was the command of God, which caused the chaos of the world to pass into a state of harmonious order. Light caused the functions of the universe to act and unrestrained they go on crushing all, that stands in the way of knowledge and progress.

In this progressive course errors separate themselves and allow us to distinguish truth from untruth.

May the light of truth open the way for, and encourage in their efforts men of perseverance, who arouse themselves from the lassitude of everyday life, to independent thought and action, in the pursuit of greater knowledge.

The battle between merit and mediocrity, requires courage and endurance, even self denial and sacrifice, because mediocrity is supported by the indiscriminating majority, who know of nothing better and in their mental indolence desire nothing new; while the advocates of merit, being in the minority, are unable to overcome the lethargy of the masses.

Only the continued appeal to the intellectual, and faith in the overwhelming power of the enlightened mind, will maintain the courage of those, who are called upon to continue the strife for that, which emanated from the tests of experience and scientific investigation.

Equipped with the results of indefatigable study of a life time and undeniable experience in the field of the art of riding. I have undertaken the task of bringing before the educated world these lectures, which are caculated to demonstrate that, like in every other art or science, a high standard can be reached in the art of riding if the same amount of love and constant application is given it, as is the case for instance with music, painting and other arts.

If we must say, in honor of the so called good old time, that it has produced great masters, the fame of whom will expire only with the world itself, it may be, that the repose and stability of affairs in general were of good influence, though it cannot be denied, that this heavi-

ness had its drawbacks; and we must also confess in justice of our period, that the time of steam and electricity, has entrained the minds of men in its course and that a certain haste and rush has seized the world, in which meditation and tranquility have ceased.

In quick tempo humanity hurries on, fearful of being distanced, toward an end indefinite and often precarious.

These observations taken from public life, apply to the science and art of riding.

In times of old the art of riding was cultivated by the educated world to the highest degree of perfection; it was then a matter of honor with the gentleman, to be an accomplished rider and in sport as in earnest he displayed his agility and bravery on horseback.

The greatest masters of the art of riding belong to past centuries and their successors can be called but their imitators.

The range of firearms has during the last century changed the design of calvary.

The impossibility to directly approach infantry, or artillery in the open field, compelled it to appear unforseen by making detours with greatest speed, in consequence of which, endurance and speed became most important factors.

This necessitated better horses and a change of cavalry tactics.

There is since the last great wars hardly an obstacle of territory, that cannot be taken by cavalry, which is equal to the requirements of the present time.

As elating as this fact is to the patriot, it has had upon the true art of riding the deplorable influence, that the horsemen of both America and Europe, are being carried along by its example to such an extent, that to-day the masters and worthy teachers of a higher art of riding are scarcely to be found and that with them the well trained saddle horse is gradually disappearing, while on the other hand superficiality is rapidly spreading and the art of riding is mutilated beyond recognition by amateurs.

"Among the blind the one eyed is king." This is an old truth and often the so afflicted will not undergo a thorough operation, because they have grown accustomed to the flattery of an impostor, and enlightenment might deprive them of their self satisfaction.

"When danger is greatest, God is nearest!" One is tempted to exclaim to those, who do not know what they undertake, when under the guidance of such a protector, they tear along on a half crude horse.

It certainly requires a person of little conscience, to so abuse the confidence of the inexperienced, and to attach so little importance to safety and dignity.

Self reliance under all circumstances in life, is surely a most important trait, in the character of the educated, and parents should try to cultivate it early in their children; but this is possible only in matters in which the parents themselves are experienced and competent to form an opinion. In branches though, that are removed beyond their judge-

ment and supervision, it is commendable, that possible dangers should not be ignored, and the most prophylactic principles employed.

The historical developement of the art of riding, is closely connected with the domestication of the horse, and the history of the same, as far as it could be traced from traditional sources and which offers many interesting points of information.

In his work on the training of the horse, Xenophon (over 2000 years ago) shows, that even then, the pliable horse had been recognized as that which more willingly yields to subordination, than the rigid and inflexible. Certain methods are clearly demonstrated in this book, which serve to make the horse docile and obedient.

We would ask: Is it not possible to give new life and distinction to this beautiful art? Does the educated world of to-day miscomprehend the noble qualities of the horse? Is the horse but a means of transportation? Does it not merit our love and careful attention, if it is entrusted with our life?

Look upon the beautiful form of a well bred horse, recognize its excellent talents and qualities, and you will treat it with more patience and consideration, and try to exact from it by careful training, that, which will move you to gratitude and joy.

Is there a more beautiful enjoyment for young and old, an exercise more beneficial to body and mind, than riding on a good horse?

Let us try and cultivate the art on horseback in a higher sense, and not shrink from a thorough going contemplation, which only seemingly requires more time, but increases in interest and attractive information, and gives us the highest satisfaction, the more we obtain of the knowledge of horsemanship.

Love for the horse will help to attain success.

K. C. von Gillmann.

General History of the Horse.

The native land of the horse cannot accurately be determined. Varying in size, height and usefulness, it is found in all of the temperate, most of the tropic and many of the northern regions of the old world. It is however established that the horse has been in existence before the last great inundation, known as the deluge, in the days of Noah. In numerous places in Europe, Asia and Africa, fossil bones of of animals belonging to the species of the horse have been found, mostly in company with the petrified remains of the Hippopotamus, the Elephant, the Rhinoceros, the Bear, the Deer and other animals. The limestone beds at Cannstadt, Wurttemberg, Germany, at Sevron, Argenteuil, France, and Vald'Arno, Italy, are particularly rich in teeth of fossil horses. At an early period, the tertiary sand, fossils of an animal, similar to the horse, have been found and called "hippotherium" this species showing two false toes on each foot. The majority of these bones are of the same size as the ones belonging to their survivors. Naturalists speak of America as the only country where skeletons of gigantic horses were ever discovered. From the bible, which aside from its higher claims, contains the first credible information on the past, we learn that 1650 years before Christ horses had been tamed by by the Egyptians.

1st Book of Moses, Chapter 50, Verse 9:

"When Joseph carried the remains of his father from Egypt to Canaan, there went up with him both chariots and horsemen."

One hundred and fifty years later, horses formed the main strength of the Egyptian army.

2nd Book of Moses, 14th Chapter, 7th Verse:

"Pharaoh persecuted the Israelites and he took 600 chariots and all the chariots in Egypt,and captains over every one of them."

Mules are mentioned very early, as it is said of the descendants of Esau, who inhabited the districts of Sier: "And these are the children of Zibeon; both Ajah and Anah, this was that Anah that found the mules in the wilderness, as he fed the asses of Zibeon, his father." (1st Book of Moses, Chapter 24.) Anah was a contemporary of Isaac, who lived 1590 years before Christ; If we may believe the statements of the ancient historians. Sesostris, probably the King, whom Joseph served, had 27,000 chariots, and Semiramis, the foundress of Babylon, had 100,000 chariots and 1,000,000 riders; but these accounts are undoubtedly very much exaggerated. Fifty years later, after the exodus of the Israelites from Egypt and 1450 before Christ, horses had already been acclimated to such an extent in Greece, that at the commencement of the olympic games, races with horses and chariots were given. We have then sufficient proof, that at a very early period the horse had been made the servant of the human race, and as we have seen, first in war. The beautiful description which Job gives of the horse, also speaks of its use in arms as follows: (Job, Chapter 38, Vers 18.) "Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him afraid of the grasshopper? The glory of his

nostrils is terrible. He paweth the valley and rejoiceth in his strength; He goeth to meet the armned man; He mocketh at fear and is not affrighted; Neither turneth he back from the sword."

The books of the old testament enable us, to more closely determine the time when the horse first began to be tamed in Egypt, Canaan and the neighboring countries. When in 1920 before Christ, Abraham left Haran and on account of the famine emigrated to Egypt. (1st Book of Moses, Chapter 12, Verse 16.) "And he had sheep, and and oxen and he-asses, and men-servants and maid-servants, and she-asses and camels." Undoubtedly horses would have been named if such had been among his herds, or if they had been tamed in Egypt at that time. Fifty years later Abraham went to Moriah to offer his only son. (1st Book of Moses, Chapter 22, Verse 3.) "And he saddled his ass, and went unto the place of which God had told him." He would scarcely have selected the ass, had horses been known at that time. When thirty years after this, Jacob returned to Isaac, with Rachel and Leah, the scripture quotes the number of animals which he had sent to appease Esau's wrath, as: (1st Book of Moses, Chapter 32, Verses 14 and 15th.) 200 she-goats and 20 he-goats, 200 ewes and 20 rams, 30 milch camels with their colts, 40 kine and 10 bulls, 20 she-asses and 10 foals." but horses are not mentioned. Not quite 24 years later, when during the famine in Canaan, Jacob sent to Egypt to buy corn, horses are first spoken of. (1st Book of Moses, Chapter 45, Verse 19.)

Joseph sent chariots, probably wagons drawn by horses, to transport his father from Canaan to Egypt; however, it seems, that horses were introduced later, and that they were not yet very numerous; neither does it seem that they were used as beasts of burden, as all the grain, which had been sent for the support of Jacob's numerous family was carried by asses; but in Egypt the herds of the inhabitants already contained horses, of which the bible says: (1st Book of Moses, Chapter 47, Verse 17.) "And they brought their cattle unto Joseph, and Joseph gave them bread in exchange for their horses, and for the flocks, and for the cattle of their herds." The above shows, that horses were first used in Egypt about 1740 before Christ, and that soon after their number was enough to form a considerable part of the Egyptian army, and when the Israelites returned to Canaan, they acclimated the horse there. (1st Josuah, Chapter 11, Verse 16.) "And the Canaanites went out against the Israelites, and all their host with them, and people even as the sand, that is upon the seashore in multitude, with horses and chariots very many." It is however uncertain that these chariots were pulled by horses, and it would seem therefore, that the use of the horse under the rider is older, than that in harness. In the army of Pharos, mainly riders are named, who received their denomination from the use of the spur; the word which in Hebraic signifies "rider" being formed from the verb which means to stick, to sting that is to spur. It follows clearly, that riding at that time, was not only a common occupation, but had already attained a certain degree of accomplishment. When on his death-bed Jacob revealed the future to his sons,

he said to Dan: (1st Book of Moses, Chapter 49, Verse17.) "There shall be a serpent in the way, an adder in the path, that biteth the horse's heels, so that his rider shall fall backward."

The bible throws light upon the subject which no other historical records explain; that is the time, when the horse was first utilized for the service of man, at least in one, and at that same time the most civilized part of the world, before Greece was populated. A long time must have elapsed, before men realized the value and real use of the animals that lived around them. In all probability they commenced with those, which they could capture the easiest and subdue the soonest. The advantages, which they derived from so doing induced them to tame animals of the class of mammals, of greater importance. In harmony with this the books of Moses show, that after the ox, the sheep and the goat, the ass was tamed, then the camel, and last the horse; but as soon as the latter had been conquered and its strength, docility and sharp senses had been appreciated, the other animals were thought inferior, except in Palestine, where the use of the horse was forbidden by divine order; or the vast or sterile wilderness, where it could not live. From Egypt, the use of the horse spread into other and distant countries, and it is probable, that the horse was ransplanted there from Egypt. The Greeks say, that Neptune struck the earth with his trident and so caused the horse to appear. The truth is, that the Thessalians, who were first and best mounted in Greece, were colonists from Egypt. Records of Natural History give another land as the nativity of the horse and its equipment: In the higher regions of middle Asia, the horse may have escaped destruction through the general overflow. It seems, that from the high valleys of the Oxus and Cashemere this species of animals and their use for the service of man, came to China, India and Egypt. It is to this last named though, that the honor is due of having judiciously cared for the horse, and to have improved its breed. This is proved by the many sculptures of that time and period, which not only represent horses well bred and beautiful, but also persons who are occupied cleaning their limbs, rubbing them, etc. All the horses are represented either entirely free or hitched to chariots; riders being found only on works of a later period. During his travels through Persia and various other countries of the Orient, the British Orientalist Ousely, inspected among other works of sculpture those of Persepolis, and from them drew a conclusion as to how the horses had been gradually subdued; He writes: "There are no images of equestrians, although they are mentioned by various travelers; one would think that the simple mounting of a horse has preceeded its use before the chariot, with its complicated harness; but in Persepolis no riders are to be found, and we know that Homer, the Epic Poet of Greece, describes his horses as attached to chariots, from which the warriors would, from time to time, alight, for the purpose of fighting on foot, and we know, that this Poet does not describe them as fighting on horseback. The absence of mounted images would support the presumption, that those sculptures were made before the time of Cyrus (530 B. C.) whose example and prescrip-

tion first inspired the Persians with a liking for horsemanship, which previously had been entirely unknown to them.

In Greece we find it quite different; upon the friezes of the temple of Minerva, on the Acropolis, which was erected many years before the destruction of Persepolis, we see many equestrians, but no horses in harness whatever; consequently, it seems that in Persia the driving of horses was customary, while in Greece it was not. The Greeks utilized chariots not for warfare, but only for public games.

The Bible decides further, that Arabia, by whose breed of horses, the breeds in other countries were so much ennobled, is not the native country of the horse. Six hundred years after the period just mentioned, Arabia had as yet no horses. Solomon procured spices, gold and silver from Arabia, but all the horses for his own use, as well as those provided for the Phoenician Kings, were gotten from Egypt. The number of his chariots is estimated at 1400, that of his riders as 12,000, and stables are supposed to have existed for 40,000 horses. (2nd Cronicles, 1st Book.) "The price of a horse was then 150 shekels (over $80.) and the price for a wagon 600 shekels (over $300)."

Before we enter upon the history of the European horse, we shall briefly mention the records of the historians, as to the treatment and peculiarities of horses belonging to the earlier periods. The inhabitants of Upper Egypt and Abyssinia were mounted, wild and robber like; he who fell into their hands was plundered and sold to foreign potentates; many hordes of them accompanied Xerxes on his campaign to Greece. In Libia, Numidia and Mauritania, from the boundries of the Desert of Sahara to the coast of the Mediterranean Sea, horses were plentiful. Aelian describes these horses as slender, thin and flighty; they needed but little care, and contented themselves with what food they found on the pastures, where they were turned loose after their day's work had been done. Even now the treatment of the horse in those regions is said to be but little better; they were originally ridden without saddle or bridle, the rider having only a switch or stick, with which he struck them on their jaws, right or left to guide them; a blow on the mouth was the sign for a full stop, and the heels were to urge them to go. The guidance of the horse by a slight touch with the finger against the neck is represented on the sculptures of the Parthenon.

If we now turn to Arabia, we find that the Historians of old do not speak of the horse; either these deserts had no horses at that time or else they were, if in existence, not worthy of mention. Syria and Asia Minor in general were not celebrated for their breed of horses, except Colophon, between Smyrna Ephesus, whose equestrians were in demand everywhere, and were thought to be invincible. Armenia produced excellent horses. The chariots of Xerxes were drawn by Armenian horses, as the most stately of his Empire. Some Historians of a latter period speak of the great care given to the mane of the horse. It was clipped in the shape of a bow, or parted in the middle, so that the mane hung on each side of the neck, but more frequently it was allowed to hang full and long on the right side. Many old works of sculpture

indicate that it was customary nearly everywhere to mount on the right side, which accounts for the hanging of the mane on that side, because the rider had to make use of it in mounting, the stirrups being unknown. In later periods, and as at the present day, one mounted his horse from the left, but the mane continued to be on the right. Media possessed horses of a similar type to those of Armenia and in large numbers. The breed of horses of Cappadocia was the most celebrated in the whole Orient; less perhaps on account of their speed, but because of their imposing appearance and high action. Founded upon the inspection of many old sculptures, Sir Mandeville, the English traveler says: "These horses heads are heavier than those of the Parthian horse, and are therefore better suited to draw chariots than to carry a rider."

It seems, that the artists of old were particularly fond of these shapes as they took great pleasure in reproducing them in their most conspicuous attitudes. Oppian says of them: "In the iryouth they are tender and soft, but the strength comes to them with years; and contrary to other horses, they are better and more powerful as they advance in age."

In Xerxes' army the Parthians fought on foot, but soon after they became celebrated as equestrians, and gained the fame of being invincible. On horseback they were extraordinarily agile, and were dreaded in their attacks as well as in their flight, for they were in the habit of suddenly reversing on their horses' backs and overwhelming their pursuers with a storm of arrows. Vegetius describes the manner in which they trained their horses and made them sure-footed by galloping over very uneven territory; these horses were lighter than those of Cappadocia and Media, and were of astonishing endurance, without needing much food or rest.

The Scythians, Medians and Parthians were followed later by the Aryans in their various tribes, all of whom were equestrians, and some of them maintained a force of from 200,000 to 300,000 horses. The speed of their marches, the quickness of their attacks and retreats, the endurance of man and horse, the appearance of horde after horde, without showing any decrease in number, and their occasional settling upon conquered districts, deserve to be mentioned here with at least a few words When toward the end of the eighth century, the Saracens had over-run a considerable portion of Europe, they were 200,000 riders strong, and much better disciplined than had been the Goths and others. Little is said of the horse from Southern Asia and eastward of the Indus, except, that chariots and riders from these distant lands helped to augment the army of Xerxes. As mentioned before, Persia possessed but few horses up to the reign of Cyrus, and these few of minor value; later their breed became celebrated. Cyrus improved and encouraged horse breeding, of which he had recognised the importance for his country, by allowing privileges to the owners of a certain number of horses; these facts together with a tendency to make an imposing show by the display of beautiful equipments, soon gave to the Persians the finest cavalry of

the Orient. The Persian horse was so highly thought of, that Alexander considered one of their breed as the best gifts, and when the Parthian Kings wanted to propitiate their Gods through a valuable offering, they sacrificed a Persian horse. Vegetius says, that they were superior to all other breeds, for their proud and comfortable gait, which made riding a recreation and not a fatigue, and that the extensive breeding of these horses was highly profitable to their owners. Horses as well as riders were often covered with armor from head to foot, and the tactics of the Parthians to cover their pursuers with arrows in sham-flight, was adopted by the Persians. Arrian describes their method of riding: "They had no bridle like the Greeks, but guided their horses with a simple sling or strap made of cowhide, which they fastened around the horse's nose. The inward side of this nose band was set with small pieces of iron, copper or ivory; in its mouth the horse carried a small iron bar, which was attached to the nose band and served to give the rein a hold as well. When this rein was pulled the points of the nose band pained the horse and made it manageable ! ! ! (?) The "Cavezon," an instrument of to-day, seems to originate from that device. We shall now enter upon the history of the horse in Europe.

The Egyptians established many colonies in Greece and brought their well-bred horses with them; it appears, that the first landing took place about the time of the birth of Moses, and in Thessaly in northern Greece. The natives of this region were so frightened at the sight of mounted warriors, that they fled in all directions in the opinion, that these creatures, seemingly half human and half horse, were monsters; they were given the name of Centaurs, and were frequently represented on monuments. According to the old Greek mythology, Bucephalus, the saddle horse of Alexander the Great, was of this breed; it would not be mounted by any one but its master, and kneeled down when he wanted to get on its back. Alexander rode Bucephalus in the battle of Hydaspes, where he finally was deadly wounded; here, for the first time it disobeyed its master: It carried him quickly out of the heat of battle, then knelt down to let him dismount, broke down and expired. Sixty years later the Egyptians founded another colony in Southern Greece, and thus introduced the knowledge of the horse in the neighborhood of Athens; their leader was Erichton, who, the same as the first Centaur, in the shape of a marksman, was entered among the Constellation of Stars as Auriga. (that is driver) The Thessalians always maintained first rank in the Greek cavalry, in fact, Thessaly was the only part of the country, which, on account of its spendid pastures was well adapted for the breeding of horses; while the remaining parts of Greece were more or less dry and sterile. After the importance of horse breeding for the army had been recognized, the necessary number of equestrians were obtained in Athens and Sparta by giving to a number of such citizens the second rank in the Republic, as well as certain honors and privileges. The Equites or Chevaliers of the Roman Republic were created in the same manner. It is on the Greek monuments that we first

meet with the bit in the horses mouth, although not generally, as frequently there is neither saddle, stirrups nor bridle to be found. To guide the horse, a strap was slung around the horse's neck. The force with which the horses occasionally pulled on this strap to liberate themselves, and the accidental catching of the same in the horse's mouth, together with the fact that they were then more manageable, may have given the first idea for a harness and bridle; to both sides of a sort of halter reins were attached, and afterward an iron mouth piece was inserted which was broken in the middle or side, or merely a small piece of chain; it resembled therefore, the ordinary snaffle, with simple knots or knobs on each end. Bits of this kind are frequently met with on sculptures of the time of Pericles. (430 B. C.) But the headstall had not been known long, as the bits were fastened with straps going around the horse's nose; this bit soon made room for a snaffle very similar to the one now in use, only that sometimes another strap came down from the headstall in front of the nose band. A chain, such as our curb chain appears now and then, probably to hold the bit in its place. The curb was unknown to the Greeks, and the only severe effects found in the old bits were rough and sharp elevations on the inside of the knobs of the snaffle, acting upon the corners of the horse's mouth; such a bit was, from its resemblance to the teeth of a wolf, called "Lupatum." Nothing was known of saddles, as we have them now, but the horse's back was covered, be it for comfort or show, with costly blankets and rare animal skins, which were fastened with a girth. According to the historical tradition, the horse of Aeneas was covered with the skin of a lion; the one of the Parthenonius with the skin of a lynx. At religious and other occasions, these covers were especially rich and not unfrequently decorated with gold, silver or precious stones, and bells were attached to the horse's mane. The stirrup was also unknown; this comfortable aid in mounting and dismounting came into use remarkably late. In the middle of the twelfth century of the christian era, the stirrup is first mentioned in the book of Eustathius; but proofs show, that it had been in use one hundred years previously. Berenger gives a copy of a horse, saddled and bridled and provided with stirrups, which is taken from a tapestry at Bayeux, and was embroidered at the time of William the Conquerer by his wife, representing scenes of his landing in England, (time 1027 to 1087). The heroes of antiquity depended upon their agility and swung themselves upon their horses' back from either side; those armed with lances and spear, had provided the same with a projectio non the lower end, or with a simple sling, which helped them to mount as well as to hold their weapons with more security. Some animals were trained to facilitate mounting by bending down their necks, or by kneeling down Persons of high rank had slaves or servants on hand to assist them in getting on or off their horses; now and then a short ladder was used, and the magistrates in Greece as well as Rome had to see, that at intervals not too far apart, mounting blocks were erected of stone, for the comfort of equestrians. At an early period the riders' legs were protected by boots, to which the spear was afterward attached. The horse's

hoofs were unprotected, and the paved streets, which are so hurtful to them, did not exist; in the meantime, lameness must have occurred from time to time, either because of the soft nature of the hoof or because horses went too fast or too long upon the high way. To remedy this nuisance, the Greeks and Romans first strapped to the hoof a kind of sandal, made of braided reeds, or of leather, and strengthened these soles occasionally with an iron plate or even with plates of gold or silver, as was the case with the horses of Nero or Pappaea. The horse shoe, in its present shape, was invented in the fifth century after Christ; later, the shoe was not only a means of protecting the feet, but to prevent deformity and disease of the hoof, or to cure the same. (Dietetic and Therapeutic shoeing.)

It is said of the Greeks that sometimes they tied two or three saddle horses together, and alternately swung themselves upon one or the other while going at full speed; of course this was not an occurrence common in ordinary riding, and Homer speaks of it, as a proof of their great ability in the art of riding, and it shows that the Greeks took great pains in breaking and training their horses. As above mentioned, the horse was in many countries first used to pull wagons, and the same may be said of Greece in its earliest periods. During the siege of Troy which lasted for ten years, not a single rider is heard of, all warriors fighting on foot or from their chariots; it appears though, that chariots rarely met in combat but drove swiftly over the battle grounds, the warrior throwing his spears in both directions, and when he found an adversary, whom he thought his equal, they halted, dismounted and fought on foot. The chariots were made for the purpose, and decorated with great pomp, the victor keeping the chariot of the defeated as booty. In some instances, three horses were hitched before the chariots, the third figuring as a reserve, in case one of the others should become exhausted, or be wounded. Hector's chariot was drawn by four horses. The charioteers, although subordinate to the warriors were rarely selected from among his servants, often it was a trusted friend of the combatant, or else a charioteer of profession. Even Hector and Nestor drove the chariots of others.

The attachment of scythe shaped blades to the war chariots was not customary with the Greeks or Romans; they could only be used in open fields, and not uncommonly they caused disturbance among their own ranks, when the horses became shy and unmanageable from noise and other causes; their use therefore, was soon discontinued. In the course of time this was the case with all the war chariots, and the higher class of warriors preferred to fight on horse back, where personal bravery and strength could be shown as well, and better order kept in battle.

Up to the Christian era, and in some countries until later, the use of the horse was confined to war, hunting and for pomp in festivities, Then racing was instituted partly for the purpose of comparing the value of different horses, and to reward their owners; and partly to give more splendor to religious celebrations. The most famous of these spectacles was given every fourth year in honor of Jupiter, during the olympic games; however, almost a century elapsed until horse racing

was added to wrestling and pugilism, that is not until the twenty-third Olympiade. In the subsequent races only equestrians made their appearance, each horse being ridden by its owner who was compelledto train himself and horse thirty days previous to the race. The horses wer classified in such, having the full age, and others, whose age ranged below this standard; but the Historians give no information as to what this meant, nor do they speak of the weight of the riders. The racecourse measured over four English miles. In one of the races, called "Kalne," only mares were entered, and toward the end of the course the riders had to dismount and with the bridle in hand, run along side of their mounts to the pole.

In the twenty-fifth Olympinade, chariot races were introduced. The chariots were placed in one line at the starting post, and their places assigned through allotment. On each side stood an altar, upon one of which stood an Eagle consecrated to Jupiter; upon the other a dolphin in honor of Neptune. Through a certain mechanism, the eagle was elevated into the air, and the dolphin disappeared in the depth, which was the sign for the start of the chariots. The Hippodrome was about one-third of an English mile in length, and at its end was a pillar, around which the chariots had to go and come back to the starting post. Six times this had to be repeated, so that the whole course may be said to have covered a little over four English miles. The turn around the pillar was the first test for the agility of the charioteers and the training of the horses; hardly had this been overcome, when they had to pass a statue of enormous size, called Traxippus (the terror of horses.) A little further and in the middle of the course there was a projecting rock, which left only little space to drive by, and where the ability of the driver was severely tested, the more so as the discordant sounds made by the trumpeters on the rock served to frighten the horses. It is to be imagined, that at the end of the race the number of chariots had decreased considerably, as some ran against the end post, others could not get their horses to pass the statue, and still more were smashed against the rock, so that the passage for the following ones were greatly obstructed. The victors in such chariot races, as can readily be seen, had to work hard for their laurels and the honors which finally awaited them. To learn how the qualities of a horse were judged at that period, we should hear Xenophon, who lived 355 to 445 B. C., and by whom a book on the art of riding has been preserved to the present age; "above all" he says "one must look at the feet, as a house of which the upper parts are handsome, but which has not sufficient foundation would be worthless, so a horse would not be fit to use in war, if his feet were weak, even though it had all the other good qualities; because no good could come from them." The Romans, in their earliest days, laid great stress upon the breed and care of the horse, but then it had already been introduced in Greece for seven centuries, and its importance there generally recognized. Races both with horses and chariots became common in Rome at an early period, but the chariot races were gradually abandoned, while the others con-

tinued in favor until the time of the Emperors, and the young men of the rank of chevaliers, devoted themselves diligently to this occupation Dangerous feats and obstacles, as in Greece, were not customary with the Roman races. The Romans are probably the inventors of the curb bit. Emperor Theodosius is represented on an antique monument, and his horse carries in its mouth a curb with levers of enormous length. Among the Roman authors, Varro, who lived about 70 years B. C., gave a description of a horse, which afterward was hardly surpassed. He says "excellent results may be expected of a colt when in running on pasture, it strives to keep at the lead of the herd, and if, when brought to a stream, it plunges into it first; if its head be small; the limbs clean and firm; the eyes clear and brilliant; the nostrils wide and the ears moderately close together; if the mane be strong and thick; the chest broad and the shoulders flat and slender; if the barrel be round and firm; the loins broad and strong and the tail full and bushy; if the legs be straight and even, and if the hocks be broad and well jointed; if the hoofs be hard and tough, and the veins visible everywhere."

Virgil, the Roman poet, gives some interesting remarks on horses, about eighty or ninety years later, and soon after, that is in the middle of the fourth century B. C., Vegetius wrote his book on veterinary science. The symptoms of diseases as a whole are acceptable enough in their descriptions, but the methods of cure as stated in his book, are hardly such as to inspire esteem for the learning of the period. Nearly at the same time the invasions of the Goths began, and soon afterwards all traces of the state and condition of science disappear in both the Eastern and Western Roman Empire. The sources of the general history of the horse have now been considered. The special history of the horse comprizes mainly the races of the horse and their peculiarities in size form build, expression and ability of performing the duties which our service demands, and it is closely related to the breeding of horses of the different countries.

History of the English Horse.

The earliest communication on the horse of Great Britain, is contained in the accounts of the invasion of that Island by Julius Caesar. The British army was accompanied by numerous war chariots drawn by horses and provided at the axles with short scythes which swept everything before them and spread terror among the enemy. The conqueror gives a vivid description of the skill, with which the horses were trained. It is useless to inquire as to what type of horse Britain then possessed, but judging from the clumsy construction of the chariots, and the rage with which they were driven, as well as from the bad condition, or total absence of streets, it is evident, that they must have been uncommonly powerful.

The views of some naturalists, stating, that the ponies of Cornwall, Devonshire or of Wales and the Shetland Islands were the original type of the English horse, are incorrect. The horse was then, as it is now, the product of the region in which it lived; small and tough, it existed where it had little food and was exposed to influences of weather; but in the marshes of Witham and on the borders of the Tees and the Clyde, the body and the strength of the horse were probably as well developed as they are to-day. Caesar considered them good enough to

take many of them to Rome, and the British horses were in demand for sometime after that in many parts of the Roman Empire.

At that time the horses must have been exceedingly numerous in Great Britain, as it is said, that King Casibelaun, when he dismissed the greater part of his army, retained four thousand chariots with the intention to disturb the Romans while foraging.

British horses were first crossed at that period, but it cannot be ascertained, whether or no this had improved their breed. The Romans who had settled in Britain, imported numerous cavalry in order to quell the frequent insurrections of the natives. No doubt the Roman horses became amalgamated with the English, and so the latter became a mixture of the native, with the Gallic, Italian, Spanish cavalry. Several centuries elapsed, during which no account is given of the English horse, as to whether its breed was improved or neglected.

About nine hundred and twenty years after the landing of Caesar, we find the British territories united under Alfred. This monarch gave great attention to horse breeding and created the office of horse thane, a dignitary attached to the court of the King.

Athelstan, the natural son of Alfred the great and the second in reign after him, laid great stress on matters of horse breeding and in the year 930 issued a decree, that no horse should be sent out of the country, unless they were gifts of the king. This showed that he carefully endeavored to preserve the breed, which was beginning to be appreciated by the neighboring countries. A document of the year 1000 contains interesting remarks on the value of horses of that time; when a stallion was lost through death or negligence, the owner was entitled to an indemnity of thirty shillings, for a mare or filly, twenty shillings for a mule or donkey twelve shillings, etc., (According to the Anglo Saxon valuation, forty-eight shillings constituted a pound, which is in silver equal to about three pounds of the present currency, and five pence made a shilling.

To check fraud on the part of dealers, the law gave to the purchaser a certain time to assure himself, that the horse was free of three diseases: three nights for staggers, three months to test the soundness of the lungs and one year for glanders. For each defect discovered after the sale, one third of the price of the animal had to be refunded, unless the defect concerned the ear or the tail, because it was supposed that the buyer should have detected these. If one lamed a horse he was compelled to replace its value, and if accused of having caused its death, twenty-four witnesses had to be procured, who under oath testified to the blamelessness of the accused.

The renting of horses was customary, and, like to-day, the hired animal was generally abused. The benevolent Howell, Prince of Wales, did not consider it beneath his dignity to issue laws for their protection. "He who hires a horse and rubs its hair so as to gall the back, shall pay four pence, if the skin is rubbed through to the flesh, eight pence, and if is sore to the bone, sixteen pence."

Even at that time there seem to have been persons who took pleas-

ure in cutting the horse's tail; he who was convicted of doing so, had to feed the horse until the hair had grown out, and besides furnish the owner with another horse for use.

When the tail was cut with the dock, the culprit had to pay the entire value, as such a horse was considered unfit for further service.

Athelstan seems to have valued some of his horses very highly, he mentioned in his will those, which were given to him by Thorbrand, and a white horse donated by Lisbrand. These names were evidently Saxon, but nothing further is known of them.

The earliest information on the Anglo Saxon and the Welch, makes no mention of the use of horses in the plow. In the tenth century a Welch law prohibited farmers to plow with stallions, mares or cows. On a piece of tapestry of the year 1066, a man is represented driving a horse to a harrow, this being the earliest record of the use of horses for farming purposes. William the conqueror greatly improved and encouraged horse breeding. He owed his victory at Hastings chiefly to his superior cavalry, his favorite horse was of Spanish blood. His suite, nobility as well as common soldiers, came from a country, where agriculture had progressed more rapidly than in England. A considerable portion of the Kingdom was divided among these men and it is undoubted, that however unjust the usurpation of the Normans may have been, Englands agriculture and particularly the breeding of horses gained by this change of her landed nobility. Some of the Barons especially "Roger of Boulogne, Count of Shrewsbury" introduced Spanish horses into their new possessions. The historians of this period, as usual principally Monks, who knew nothing about horses, give us very little exact intelligence on this subject.

The Spanish horse was esteemed highly on account of its handsome appearance and proud movements, and was sought particularly for tournaments and occasions of pomp. The courage and agility of the rider, could be most advantageously displayed on such a noble and spirited animal.

The first Arabian horse, or at least the first known of, came to England under the reign of Henry the first, in the year 1121. Alexander the first, King of Scotland, gave to the church of St. Andreas, an Arabian horse, with rich equipments, Turkish armor, numerous precious ornaments and a considerable dowry. It is said, that the lineage of some horses, can be traced to this Arab, an assertion for which, however, the proofs are lacking.

Henry the second imported horses of foreign blood, but nothing is known of their origin. Maddock speaks of an increased expenditure for the maintenance of the Kings horses, "which had recently come from across the sea."

About that time Smithfield became celebrated as a market for horses. Of the method in which ordinary saddle and war horses were tried there, Fitzstephen, as a contemporary, gives the following account: "When there was to be a competition among these or other horses, which were strong and fast in their way, there was invariably

an exclamation of joy and the common horses had to clear the field. Three jockeys, or sometimes only two, prepared for the race. The horses were not without ambition, they trembled with impatience and kept constantly in motion. Finally, when the sign was given, they broke away and dashed with great speed to the end of the course; animated, and hopeful of applause and victory, the riders spurred their willing mounts, swung their whips and tried to urge them by shouting." His description reminds us of the longer races of to-day and proves the value of the English horse, even before its improvement by the introduction of Oriental blood had been attempted.

Immediately after this the crusades began. Undoubtedly the crusaders might have enriched their country with choice Oriental horses, but they were entirely wrapped up in superstition and romance, and so lost this opportunity.

An old romance speaks of two (probably Oriental) horses, which Richard the lion hearted, acquired on the Island of Cyprus, that neither horses nor camels could equal them in speed, and that they could not have been bought for two thousand pounds in gold.

The price of horses at that time varied a great deal. In the year 1185, fifteen brood mares were sold for two pounds, twelve shillings and six-pence; they were bought by the crown and distributed to the vassals, each of whom paid four shillings. Twenty years later, ten stallions brought no less than twenty pounds a piece, and twelve years after this, the sum of thirty-eight pounds was paid for a pair of horses imported from Lombardy. The usual price for a good saddle horse was ten pounds, and for a hired wagon or cart, with two horses, ten-pence per day were charged. Great credit is due to King John for the care he gave to agriculture in general and horse breeding in particular. He imported one hundred select stud horses from Flanders, which added much to a production of a well bred draught horse in England.

John established numerous and valuable studs; he eagerly craved the possession of any excellent horse and took pleasure in receiving from his vassals magnificent horses, instead of money for a fine which was due, or for rights and privileges granted them. He took pride in his cavalry, which he endeavored to perfect as well as the horses used in tournaments and for luxury.

One hundred years later Edward the second, bought in Lombardy, thirty war and twelve heavy draught horses. The countries from which at that time the greater part of Europe procured their better horses, were Lombardy, Italy and Spain. Flanders supplied the horses required for agricultural purposes.

Edward the third purchased fifty Spanish horses and attached such importance to this addition to the English or rather to the mixed blood of the period, that he made a formal application to the Kings of Spain and France, for the protection of the consignment of horses during their transportation. When they had safely arrived, it was calculated, that the cost of each horse was no less than thirteen pounds,

six shillings and six-pence, or one hundred and sixty pounds of our currency. These horses were meant to serve, partly to the continuation of the war with Scotland, partly for a tournament, which the King intended to give. To the latter festivities and for warfare in general only stallions were used; the altering of horse colts was not customary and the use of mares among so many horses would have led to disturbances. Mares were considered inferior at that time, but when the castration became more general the price of mares increased, because it was found, that even though they were inferior to stallions, they possessed strength and comparatively more courage and more endurance, than geldings. Edward the third possessed several race horses; but the real meaning of this term is not clearly shown, either they were light and fleet, as contrary to the war horse, or they were literally used for racing. The average price of these race horses was eight pounds, six shillings and eight-pence. The King was a lover of racing and hunting and began to recognize the advantage of crossing the stately and heavier horses with those, which were lighter and possessed more speed.

The heavy armor of the soldiers was a drawback, which afterwards was removed. The rider with all his equipments frequently weighed over fourteen stone (14 pounds per stone), and to carry this a horse had to be of more than ordinary, size and strength. Only after the musket was substituted for the war axe and the iron armor was dispensed with as useless, the actual improvement in the breeding of horses began in England.

While Edward the third profited by the importation of foreign blood for the horses of his country, he was unwilling, that his neighbors should share the advantages of this proceeding. The export of horses was prohibited under a very heavy penalty. Only one exception is known to have been made, when a German horse dealer was permitted to take out of the country, a few horses, brought there on speculation, and then only on the condition, that he would take them to Scotland. The Kingdoms of Great Britain, were so jealous of each others prosperity, that up to the reign of Queen Elizabeth it was considered a capital crime, to export horses to Scotland.

In this way the English horse became slowly the equal of, and superior to the horses of neighboring countries, its value was more generally and more highly acknowledged and prices became so high, that the breeders and dealers received enormous sums for their stock, from many of the young and inexperienced noblemen. In the year 1386 Richard the second saw fit to cause a reduction in prices. This measure was interesting, not only because it showed the increased value of the horses of that time, but also because it mentions the districts which five hundred years ago, cultivated horse breeding.

The decree was given and published in the counties of Lincoln and Cambridge and in the eastern and nothern districts of York county, and the price was reduced to the sum sanctioned by the

former Regents. A more liberal policy finally stopped this absurd interference in the affairs of agriculture and commerce.

Up to the reign of Henry the seventh at the end of the fifteenth century, little has been recorded about horse breeding. He maintained the law prohibiting the exportation of stallions, but mares aged over two years and of a value less than six shillings and eight pence, could be exported. In order to prevent the mixing and degeneration of the breed, which was caused by the fact, that in the autumn, animals of all kinds and of both sexes, were turned out together on pasture, the King forbade the turning out of stallions, which had in consequence that all inferior specimens were altered and only the best ones were retained for breeding purposes. A gait which at that time was particularly well liked, was pacing. A contemporary says, that the English horses were rarely made to trot, but that they excelled in the comfortable gait of pacing; the front feet were held together by chains and the hind feet were provided with shoes, which at the toe had a long projection, to teach them to pace.

Henry the eighth, who was fond of display and splendor, favored the breeding of excellent horses. He limited the size, under which no horse was to be kept: the lowest measure for a stallion was fifteen hands, and for a mare thirteen, and even before the horses had their full growth, no stallion under fourteen and one half hands could be turned out on pasture or in the forest, where mares were at large. Once every year the authorities had to inspect both forest and pasture and not only stallions, but mares and geldings, which were considered unfit for breeding or other purposes, had to be killed. He also ordered, that each deer park should contain a certain number of mares at least thirteen hands in height, and all his prelates and noblemen, and all, "whose wives wore velvet bonnets" had to keep stallions for riding, of at least fifteen hands. These decrees expired with the tyrant who issued them.

The oldest English treatise on agriculture and the treatment of horses and cattle appears under Henry the eighth. It was written by Fitzherbert, the judge of the civil court at Westminster and contains much valuable instruction. The title of this book, which has now become very rare, is "Book on agriculture". It appears that mares were not then generally used for farming, and the author says, "a farmer should not be without mares and stallions and particularly if he plows with horses, he should have both, and use the male horses for draught and the mares to bear colts, in order to keep up the stock, and sometimes one may use mares for work, when they are gently treated."

It was easy to forsee the results caused by the tyrannic edicts of Henry the eighth; horse breeding did not materially improve, and decreased decidedly in quantity.

When England, under Queen Elizabeth, was menaced by the invincible fleet of Philip the second of Spain, the Queen could in her entire Kingdom raise a cavalry of only three thousand men, and

Blundeville, who wrote at that time a splendid work on the art of riding, spoke disparagingly of these horses.

The secret of how to improve horse-breeding was not yet discovered; it was attempted with despotic force, and only with crossings, of which nothing extraordinary could be expected, or rather it was related to the existing peculiarities of the country, the heavy vehicles, poor roads and slow mode of traveling, and suggested nothing of the remarkable changes, which in future centuries took place.

Blundeville describes the majority of the horses as strong, heavy and adapted only for heavy draught, a few were light, but these were soft and of no endurance. As an exception he mentions a horse which covered in one day the distance of eighty English miles.

Tests of speed were made at Smithfield, and in different parts of England races were instituted regularly; the first gatherings of this kind took place at Parterly, Croydon and Stamford; but there was neither a system like at present nor any particular type of horse, but hunters and ordinary saddle horses ran together and the meetings were open to all comers.

There was at first no course laid out, but the races were run following a trail across the field and sometimes the most difficult ground was chosen. Then the steeple-chase came into existence, with its many dangers and more of cruelty, than at our time, men being stationed at intervals, whose duty it was, to whip the tired and exhausted animals to new exertion.

It must however be acknowledged, that the horse races in those days were not disgraced by betting and fraud, which seems to have become inseparable from racing and hunting to-day. The prize consisted ordinarily of a wooden bell, decorated with flowers; later the bell was made of silver.

Horse racing now became more popular, but only in the last year of the reign of John, were they governed by general rules. The races however were often but mere bets, as to who would reach the end first, or tests of speed and endurance over unreasonably long distances.

The improvement by crossing English mares with Turkish and Barbe horses in order to produce good race horses, was extensively tried, but with little success and John decided for an experiment with the Arabian breed. He probably remembered the history of the Arabian stallion, given to one of his Scotch churches five hundred years previously. From a dealer by the name of Markham he purchased a celebrated Arab stallion for the sum of five hundred pounds. Kings, like their subjects, are often influenced by the opinions of their servants; the Duke of Newcastle had an aversion against this foreign horse and in his book on the art of riding, he describes this Arab, as a thin legged good for nothing horse, because, after a season's training, it could not race successfully. The opinion of the Duke, though probably incorrect, was then of great weight and the Arabian horse lost its reputation among English horse breeders. Another horse of Oriental origin was then brought to England and called White Turk, then fol-

lowed Helmleys Turk imported by the first Duke of Buckingham, Fairfax's Moroccan and others, these soon wrought a change in the breed of English horses and Lord Harleigh, one of the old school, complained that large horses were almost disappearing and that only light and fine horses were produced, with a view of obtaining speed.

Charles the first instituted the races of Hyde Park and Newmarket, and introduced the use of the curb bit. In the third year of his reign he issued an order confining the use of the snaffle to hunting and racing.

After the restoration of Charles the second, in the year 1660, horse breeding received new encouragement. Charles the second sent his Master of the horse to Levante to buy stallions and brood mares, these were chiefly Barbes and Turks.

John the second had little time to devote to horse racing, of which he was a great lover and when, after his abdication, he lived in France, imported English horses.

From this time on to the middle of the past century, the system of ennobling the English horse by crossing was actively continued; every variety of Oriental blood was bred with the English, and the superiority of these crossings over the best of the original stock became apparent. In the latter part of the reign of Queen Anne; Darley took refuge with the rejected blood of the Arab, he had to struggle against prejudice and it was some time before Darley's stallion attracted attention. Finally the value of his gets was appreciated, and now we owe to him a breed of horses, which in beauty, speed and endurance has no equal.

The recognized superiority of the English horse is due, not only to climate and other characteristics of the country itself, but is the result of scientifically conducted breeding, which means not only the procuring of a good original stock, but also the careful raising of the descendants, and above all, the judicious selection of the individuals intended for propagation.

Lecture II.

THE THOROUGHBRED.

The origin of the thoroughbred horse has been much disputed; some say that its ancestors are purely Oriental, others assert that it delineates from the native horse, the breedof which was improved and perfected by judiciously crossing with the Barbe, Turk, and Arab. The stud book, an acknowledged authority, traces the pedigree of all the old racers to Oriental origin, or to a period of which the records are lacking. If the pedigree of a runner of to-day is demanded, it is traced back to a racer of renown, or it begins with an Oriental sire, or in darkness.

It must be admitted on the whole that the present English thoroughbred is of foreign origin, improved and perfected by the influence of climate and careful culture. There are however exceptions, as Sampson and Bay-Malton, a crossing with common blood having taken place in both instances, though they were the best horses of their time. In some of the best racing stables and particularly in the studs of the Earl of Grosvenor and Egremont this was an established principle. The British climate and good judgement have made the thoroughbred what it is.

During the last century great attention was given to the pedigree of the race horse. In the pedigree of almost every noted runner, not the slightest defect can be discovered, and if with the brilliant exceptions of Sampson and Bay-Malton, a drop of common blood was mixed with the pure strain, it was at once expressed and recognized in the inferior conformation or lack of endurance, and from two to three generations were required to remedy the defects and their consequences.

The race horse excels through its beautiful Arabian head, its fine and well connected neck, its long slanting shoulders, well built hind legs, broad muscular quarters, its flat, and from the knees down, rather short cannon bones, which, by the way, are not always as broad as they might be, and its long and elastic pasterns.

Darley's Arab was the sire of the best racing stock. Mr. Darley bought him at Aleppo, he was foaled in the neighboring desert of Palmyra.

The immediate descendants of this invaluable horse were the Devonshire or Flying Childers; the Bleeding or Bartlett's Childers, Almansor who was never trained and others.

Through the two Childers, the blood and the fame of their sire was spread broadcast; they sired other Childers; Blaze, Snap, Sampson, Eclipse and a multitude of excellent horses.

The Devonshire or Flying Childers, so called by his breeder Mr. Childers of Carrhouse, was the fleetest horse of his time, he was afterward sold to the Duke of Devonshire. At first trained for hunting, his extraordinary speed and fire caused him to be placed on the race course. He ran over the round course of Newmarket (3 miles, 6 furlongs and 93 yards) in six minutes and forty seconds, and covered the Beacon course (4 1-8 miles and 158 yards) in seven minutes and thirty seconds.

In October 1741, Mr. Wilde wagered to ride 127 miles in nine hours at the Curragh races in Ireland, he covered the distance in six hours and twenty-one minutes with ten horses.

Thornhill excelled him 1745 by riding from Stilton to London and back and again to London, altogether 213 miles in eleven hours and thirty-four minutes, which means, deducting the time for changing of mounts, 20 miles per hour for eleven hours.

Shoftoe in 1762 rode 50 1-4 in one hour and forty-nine minutes with ten horses, of which he rode five a second time. In 1763 he won an extraordinary wager; 100 miles were to be ridden each day for 29 consecutive days, and not more than 29 horses were to be used; he executed this, with 14 horses and in one day rode 160 miles.

Hull Squibbler furnished the greatest proof of strength and speed of a race horse on record. In December 1786, he ran around the plain of Newmarket, (23 miles) in 57 minutes and 10 seconds.

Eclipse was sired by Marsk, who was a grandson of Bartlett's Childers. Much was said of the beauty or rather the peculiarity of his build. The considerable expansion, the slanting and low position of his shoulder was remarkable, as well as the length of his forehand, the broad and well proportioned hind hand and the pronounced muscles of his fore-arm and thigh, Nothing definite can be said of his speed as he never had a competitor, who was fast enough to test it. He was raised by the Duke of Cumberland and after the death of the latter he was sold to Wildman, a sheep dealer for 75 guineas. Colonel O'Kelly bought a part interest in the horse from Wildman. In the spring of the following year, when his reputation was at its height, O'Kelly wished to become the sole owner and purchased the remaining share for 1000 guineas.

He was thick winded and for that reason did not come upon the race course until his fifth year.

After Eclipse had distanced all competitors in a race in 1769, he beat in the following spring Wentworth's Bucephalus, who had never before been beaten; two days after he distanced Pensioner and in August of the same year won the great subscription race of York. As there were no owners willing to run their horses against him, he concluded his victorious course by winning the King's Plate on the 18th of October, 1779, over the course at Newmarket. He was never beaten, never forfeited an entry fee and won for his owner more than 25,000 pounds.

Later he was used for breeding; he was the sire of 334 winners, and these realized for their owners over 160,000 pounds in money, not counting plate and cups. The income, which the owner derived from Eclipse must have been enormous.

After he left the race course, Colonel O'Kelly was asked to sell him, he demanded 25,000 pounds sterling, an annual rent of 500 pounds, as long as he (Mr. O'Kelly) lived, and the privilege of his service for six mares yearly. The stallion lived almost ten years longer and served for a number of years at 50 guineas. The neglect of his hoofs caused disease and his value as a sire as well as that of his gets became dubious. He died in February, 1789, at 25 years of age.

More than 20 years after Darley's Arab, and after the value of the Arabian blood had been generally recognized, Goddolphin possessed a stallion of peculiar conformation. He was called an Arab but was in reality a Barbe. Only after the birth of Lath, one of the best horses of the period, his excellent qualities were appreciated. He died in 1759, at the age of 29 years.

In the beginning of the 18th century, horse races were instituted in almost every large city in England. The contests were chiefly between full grown horses. These races were of a kind, which required both speed and endurance and the true value of the horse became thereby apparent, which added to the improvement of the breed.

The distance as a rule was three or four miles and occasionally more, and evidence of remarkable speed was shown as well as in the mile and one-half races of to-day.

The author of a very interesting treatise, comparing the English race and saddle horse of the past century, with that of the present, speaks of a horse "Exotic" which appeared on the course for eleven consecutive years. In the seventh year it won a race at Peterborough consisting of four heats at four miles each.

What are the race horses of to-day? They are indisputably faster, they are longer, lighter in build and yet muscular they are creatures, as beautiful as one would care to see, but the majority of them are exhausted when the first half of the course is run and of fifteen or more starters, only two or three come under the wire in possession of their full vigor; and what becomes of them after the race? After a hard run, as the races of former days are now called, the horses came in none the worse for their exertions, and year after year they were in condition to start. But now, a single race as the Derby, is apt to disable the victor, occasionally forever, and yet the course is but one mile and a half. The St. Leger is still more dangerous, although the distance is not two miles. The race is over, a few large bets have been won by the owner of the animal and the latter, whose performance accomplished the victory, is led away with beaten flanks, bleeding sides and sprung tendons, perhaps never to be heard of again. It has answered the purpose for which it was raised, and that it is sufficient!

What has prompted honest and sensible persons to change the character of the English race horse and with it the English horse in general, to such disadvantage? It is not simply the natural course of events, which has brought it about. At the beginning of the past century and even until later race horses were beautiful and powerful animals, with almost as much speed as could be desired and an endurance, which was not easily exhausted. These horses were bred not only with a view of satisfying the expectations of the owner on the race course, but even if his hopes were not realized, he consoled himself with having raised an animal, valuable to the country. Later the demand on speed increased steadily; certainly at the expense of strength and endurance. Horses were bred only to win races. The re-

sult of this principle was an animal longer in body, as beautiful as its ancestors or more so, but less satisfying to the eye of the competent judge, because they were less muscular, their tendons not as free, the withers sharper but less powerful. The proof, that endurance has decreased, lies in the fact that these horses could not run over the long courses of their ancestors and consequently only one half the distance of the former courses has been adopted for most flat races. Speed was desired and obtained; but something of the old and incomparable breed should have been retained in order to be able to fall back upon it, when the World recognizes its mistake.

Another circumstance must be mentioned here. Under the old system, as a rule only the fittest horse could win, but in the present races with very young horses for a short distance, when the real contest is limited to a stretch of two or three hundred yards, much depends upon the rider, and if the horses are not too unequal, the outcome is wholly in the hands of the jockey. If he can depend upon the endurance of his horse, he may easily distance all his competitors; on the other hand, he will try to save the strength of his swift, but readily exhausted animal, until near the end of the course, and then at once rush toward the finish before his adversary could gather himself for the last exertion.

Among the great race horses of the earlier part of the nineteenth century, were Colonel, who was foaled in 1825. In 1828 he ran a dead heat with Cadland at the Derby, beating Zingare and seventeen others. He also won the St. Leger at Duncaster over Beldine, Velocipede and seventeen others. He was sold to King George the fourth for 4000 guineas.

Fleur de Lis was raised in 1822 by Sir Ridley. She was by Bourbon, a son of Sorcerer, out of Lady Rachel, the latter by Stamford, her dam was Young Rachel by Volunteer out of Rachel, a sister to Maid of all work, and originated from High-Flyer on both sides of her parentage. Bourbon had been a winner 17 times in 23 races. Fleur de Lis was in size and conformation the most beautiful throughbred mare ever seen in England. She was fully 16 hands, beautifully proportioned and possessed an inexhaustible strength, which she showed particularly toward the end of her races.

The breeding of thoroughbreds for the race course, is continued with great zeal, but a spot in the pedigree is not a cause for anxiety, as much as it was formerly and before long horses like Hotspur, Marlborough Neck, Lady Superior, Courouch and other half bred horses and their descendants will have to be admitted to the stud book.

THE HUNTER.

The hunter should not be under 15 or over 16 hands in height; if he measures less, he will not always be able to follow, and more than 16 hands is apt to make him awkward.

The more the country is cultivated, the faster the hunt is ridden. The trail of the fox is deeper and the scent lies better on cultivated

ground, than in the open and barren land, where the hounds are obliged to follow the scent with their nose close to the ground and must consequently go slower. Endurance is always essential, but speed has become more necessary with the hunter and consequently blood is a necessary quality. In a country, where obstacles are abundant, a half-bred horse may be of good service, but for general use, the hunter should be at least three quarter bred, perhaps seven eights. If a thoroughbred can be obtained of sufficiently strong bones and higher movements, it would be the best hunter; but the thoroughbred with his characteristic gait would not carry himself high enough, to see the the fences, even at less than full speed.

The first quality of a good hunter is, that he should be fairly light in hand; therefore the head should be small, the neck thin, the crest firm and arched and the jaws wide; then the head will be well attached and form with the neck, that angle, which admits a light and comfortable guidance.

Something of a ewe-neck diminishes the beauty, but interferes in no way with the speed, but rather draws the centre of gravity forward and facilitates respiration.

Even if the race horse lies heavily in the riders hands, the fatigue is of short duration and over with the race, but with the hunter, who is our companion for the whole day, it is of importance, that it should not tire the rider too much, through the weight of head and neck. The fore-hand must be more elevated, than with the racer; with the latter it is pardonable if the hind-hand is from one to two inches higher than the fore-hand; the bulk of his power coming from the hind-quarters, and a lower fore-hand will draw more weight forward and thus add to the speed.

With the hunter a good elevation of the fore-hand is indispensable; the shoulder must be of the same dimension and lie as obliquely as that of the runner, but at the same time be stouter, so as to keep the saddle in good position during a long ride. The chest must be rounder to give increased capacity for lungs and heart. A broad chest is an advantage with the hunter. The forearm must be as muscular as that of the runner or more so, the cannon bone seen from the side and particularly under the knee broader, because the freer the tendons the greater the mechanical advantage of their functions. The shin bone must be short, because a higher gait is demanded of the hunter, than of the runner, and particularly while leaping over hedges and fences, it must be able to draw the cannon bone well up to the forearm in order to clear them. The pastern should be shorter and less oblique in position; long pasterns are good in the race horse, because they break the shock, with which it comes to the ground after its enormous leaps, and the oblique position of the various bones of the foot serve the same purpose, but this elasticity involves necessarily greater weakness. The hunter, owing to its varying gaits needs more strength to carry its somewhat heavier body and greater weight of the rider and to endure the great strain of a days work.

The hoof is an important point with the hunter; it is so with the racer, but it is also a fact that many thoroughbreds have but tolerably good hoofs. The narrow, contracted hoof, is the curse of racing blood; but the work of the race horse is performed on the turf, where the hoofs are not liable to injury, while the hunter is frequently obliged to cover ground, that is hard and stony, where his hoofs will soon suffer if they are not very good.

The body of the hunter, in comparison with that of the racer, must be short and compact. A compact horse with a shorter stride will hardly strike the ground, while in a longer stride the feet will sink deeper into the ground and the horse exerts itself in extracting them. Every rider knows that a short bodied horse can stand more in the way of climbing, although it does not descend hills so easily.

It is unnecessary to say, how important temperament and courage are with the hunter. A high strung, irritable horse is very annoying, and a timid one, that is inclined to refuse the lowest obstacles, is apt to ridicule the rider.

Air, exercise and feed are the three words, which embody the secret of good training for the hunter.

When the hunting season is over, the horse should be turned out, as soon as possible; let it have the entire month of May and the month June partly or entirely; but when the grass is scarce, the ground hard and flies plentiful, take it in. Thus the whole advantage of a free pasture, which no box stall or medicine can supplant, is obtained, without the disadvantages of a too prolonged pasturage.

THE ORDINARY SADDLE HORSE.

This horse for various reasons is more difficult to obtain in its perfection, than even the hunter or racer. The price of the saddle horse, destined to serve so many purposes, is so low, that he, who possesses a good one does not care to part with it, and it may be considered good fortune to chance upon such a horse.

There are indeed many defects, that may be overlooked in the hunter, but which the ordinary saddle horse must not possess. The hunter may be inclined to run away, be awkward at a walk or even at a trot, he may have thrush or corns, if he only gallops along at a good tempo, has good wind and endurance, and jumps well, we may be satisfied. But the saddle horse, if it is to be good for anything, must have sound good legs, good hoofs, a quiet temperament, must not shy, be light in hand and sure footed.

It is a mistaken idea, that the horse will never fall, if it only lifts its legs high. The higher the animal lifts its feet, the greater the force with which it will set them down, the rider will in proportion feel the increased shock and the hoofs will be more apt to suffer. A horse with great knee action will not always be fast, its gait will rarely be comfortable and in the long run not more secure than others. It is a matter of experience, that the safety of a horses gait depends much more upon how its feet are set down, than upon how they are raised, and still more

upon the fact, that the foot is at once set flat upon the ground, than upon the most elevated action. If the toe touches the ground first, it may be expected, that the horse will occasionally knuckle over. An unexpected obstacle will throw the centre of gravity of the animal forward and it will fall. If the toe digs into the ground before the foot is firmly set down, a trifling circumstance may cause a misstep and a fall. A stumbler can be recognized by the fact that the toe of the shoe is worn, while the heels are scarcely used.

The saddle horse, like the hunter, must possess more or less blood according to the nature of its employment. Three quarter or half bred will make a useful animal for all service.

THE ANATOMY OF THE HORSE.

THE SKELETON.

BONES OF THE HEAD.

(*a. b.*) The occipital,
(*c*) Parietal,
(*d*) Frontal,
(*e*) Temporal,
(*f*) Malar,
(*g*) Lachrymal,
(*h*) Nasal,
(*i*) Superior Maxillary,
(*k*) Pre-maxillary,
(*l*) Inferior Maxillary,

THE TEETH.

(*m*) Incisors 12,
(*n*) Tusks or bridle teeth 4,
(*o*) Molars 24,

THE VERTEBRAE.

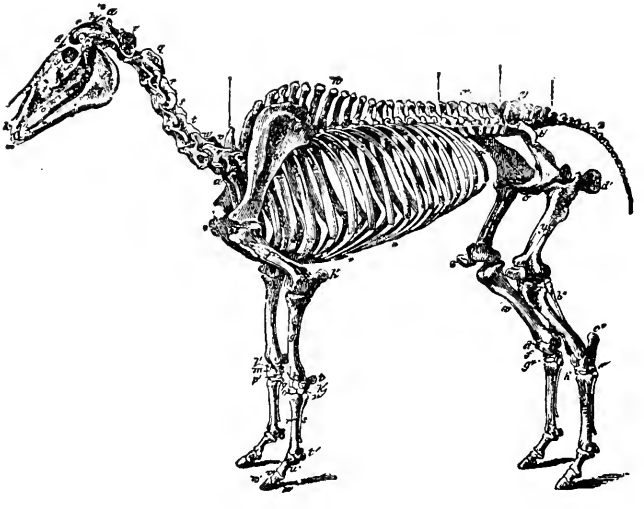
(*p-v*) Cervical 7,
(*w*) Dorsal 18,
(*x*) Lumbar 6,
(*y*) Sacral 5,
(*z*) Caudal 15 to 18.

BONES OF THE TRUNK.

(*a'-a'*) Ribs 18 pairs,
(***) Sternum or breast bone
(*b'*) Ilium,
(*c'*) Os Pubis,
(*d'*) Ischeium,

BONES OF THE LIMBS.

(*A*) Front limbs:
(*e'*) Scapula,
(*f'*) Humerus or first bone of the true limb
(*g'*) Radius or forearm,
(*h'*) Elbow, or Ulna
(*i' to q'*) The bones of the knee joint or carpal bones;
Pisiforme, Scaphoids Lunar, Cuneiforme, Trapezoides Os Magnum, Unciforme or hook like.,
(*r'*) Cannon bone,
(*s'*) Splint bones,
(*t'*) Sesamoids,
(*u'*) The great pasterns,
(*v'*) The little pasterns or coronaries,
(*w'*) The coffin bone,
(*x'*) The navicular.
(*B*) The hind limbs:
(*y'*) Femur or upper bone of the thigh,
(*z'*) Patella or knee pan,
(*a''*) Tibia or great bone of the leg,
(*b''* Fibula or small bone of the leg,
(*c'' to b''*) Bones of the hock joint or tarsal bones,
(Os Calcis or heel bone, Astragalus Cuboides. the navicular bone of the tarsus, The middle and outer cuneiforme bones. The balance of the bones of the hind limbs, are the same, as those of the front ones.

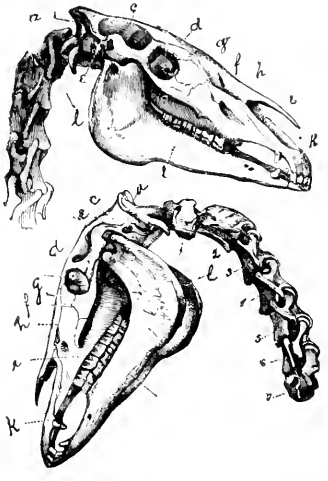


For a due comprehension of the shape and action of the horse, the rider should possess a thorough acquaintance with the arrangement and position of the bones and their relation to one another.

The osseous framework or skeleton of the horse must therefore be attentively studied. The importance of this study cannot be too strongly insisted upon, for without a knowledge of the bones, the precise situation of the muscles cannot be determined or their action on the limbs properly understood.

The series of bones comprised in the skeleton may be conveniently divided into four groups; the first comprehending the bones of the head, the second the vertebrae, the third the trunk and the fourth the bones of the limbs.

The bones of the head may be divided into those of the cranium and the face. The cranial bones include all those which cover or inclose the brain, they are for most part arranged in pairs, one on each side of the



mesial line of the skull. The frontal or bone of the forehead (*d*) forms the broad flat surface between the eyes and extends with a narrowing outline toward the top of the head. Considerable difference in the width of this bone may be noticed in various horses, and it will generally be found that the broad and ample forehead is a mark of high breeding and superior intelligence. The parietal (*c*) extends backwards from the frontal to the poll, it has a ridge or crest of great strength and hardness along the upper surface, from which the bone slopes down like a roof on each side, covering the brain, which it is mainly concerned in protecting.

Immediately behind the parietal and covering the entire back of the head is the occipital (*a*) a bone whose position exposes it to greater strain, than any other of the component parts of the skull are liable to. The occipital has to support the whole weight of the head, which is articulated by two round protuberances or condyles at the base of this bone,

to the atlas or first vertebrae of the neck. On the outer sides of the occipital and beyond the condyles are two styliform processes or pointed projections, for the attachment of some of the muscles of the neck, which assist in supporting the head. The temporal (*e*) bone unites above with the parietal and behind with the occipital. It contains the internal parts of the ear and has a depression or hollow beneath for the articulation of the lower jaw. Anteriorly this bone joins the extremity of the frontal and continuing forward unites with the malar (*f*) or cheek bone, making up the zygomatic arch and forming the greater part of the orbit, which is completed by the lachrymal (*g*), or small facial bone at the inner corner of the eye. Immediately before the frontal, is the nasal (*h*) bone, one of the principal bones of the face and covering the delicate membrane of the nose. The superior maxillary (*i*) is a large bone occupying the side of the face, It carries all the molar teeth or grinders and the tusks of the upper jaw. The nippers or incisor teeth are inserted into the premaxillary (*k*), which uniting the two bones last mentioned, completes the framework of the nose. The lower jaw consists of two bones only, the inferior maxillaries (*l*), these are rounded at the hinder extremity of the jaw and terminate in two processes directed upwards. The terminal projection or condyloid process, articulates with the temporal bone at the base of the zygomatic arch and forms the hinge on which the whole lower jaw moves. The second process, termed the coronoid, passes under the arch and receives the lower end of the large temporal muscle, which arises from the parietal bone and is principally concerned in moving the jaw in the act of mastication.

The vertebrae of the neck are seven in number and are called cervical. The atlas, which articulates with the skull is a ring shaped bone, with broad lateral projections; but without any other prominent characters. It has great freedom of motion on the second bone or dentata and on the peculiar articulations of these two vertebrae, the power of turning the head mainly depends. The remaining five bones of the neck closely resemble each other, they have various small processes, for the attachment of muscles and ligaments, and therefore will be sufficiently understood by an examination of the cut. Eighteen vertebrae are given to the back and called dorsal, these are the only ones bearing the ribs, then follow six lumbar or those of the loins, situated between those bearing the ribs and the haunch bones.

The number of ribs is sometimes found to exceed that of eighteen; nineteen and occasionally twenty ribs being found in the horse; but in such cases there is no actual increase in the number of bones in the vertebral column. The dorsal and lumbar vertebrae together are always twenty-four, so, that if one or two ribs above the normal number are present, thereby increasing the dorsal series. the lumbar vertebrae are proportionately reduced. The sacrum includes five bones, which in the grown horse are united into one mass and thus act as a kind of wedge or keystone to the arch formed by the approximation, at this point, of the haunch bones. Great strength and solidity are required here, as the united bones of the pelvic arch are the great pivots, on which the hind

limbs turn, and by which they are enabled to throw forward the whole weight of the animal. The remaining vertebrae are of the caudal, usually fifteen, more or less. The most prominent feature in each dorsal vertebrae is the strong spinous process on its upper surface, these are largely developed on the anterior portion of the dorsal series, and produce the elevation above the shoulder called the withers. They are of importance, because they afford a large surface for the attachment of the ligament, which supports the head and neck. Altogether they form the ridge of the back. On each side of the vertebrae transverse processes are situated, articulating with the ribs, and the smaller oblique projections serve to unite one vertebrae to the other. The spinal column has considerable flexibility as well as very great strength. Besides there are also ligaments along the broad under surface of the vertebrae, others again between the transverse processes, and similiar strengthening ties, uniting the upright projections or spinous processes; the whole mass forming a marvel of strength, lightness, and flexibility.

The ribs are jointed to the transverse processes of the vertebrae and curve with some variations in their outline and direction, down towards the sternum or breast bone, to which the first eight or nine of them, called the true ribs, are attached by their extremities, which, to provide the elasticity, necessary for the expansion of the chest, are composed of cartilage. The remaining ribs are termed false ribs, as they have no individual connection with the breast bone; they are however, united together by cartilage, each on its own side, and thus the cartilaginous union ultimately terminates in the sternum; so that the whole of the ribs are enabled to act in uniformity. The sternum in the young horse consists of six bones, which become united into a single piece in the full grown animal. The front of this bone is convex and sharply keeled, its upper extremity projecting, so as to be easily observed in the living horse. This is known as the point of the breast and its place will be easily ascertained, when it is remembered, that the lowest part of the collar just covers it. The haunch or pelvis is in reality made up of six bones, three on each side, the whole firmly united into one. Of these the ilium is the most important; lateral prolongations of the ilium produce the prominences so conspicuous just above and in front of the hind quarters in every horse. The ischium is a backward continuation of the ilium and bears a considerable tuberosity, which projects on each side a little below the tail. The pubis, apparently a single bone, is connected with those already mentioned, and forms an inverted arch with them below.

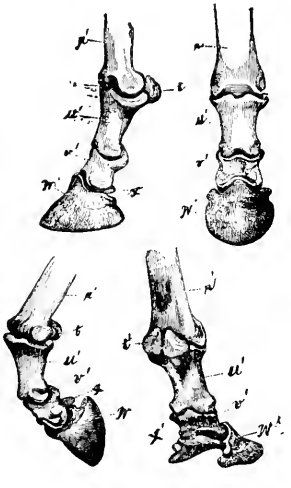
The front leg is united to the body of the horse, by means of the shoulder or scapula (*e*), which has a flattened and long triangular shape. It is strengthened by a ridge or crest, dividing it lengthwise into two somewhat unequal portions. The scapula rests on the ribs and is united to the body solely by muscles.

The humerus (*f*), is a short and somewhat twisted bone, articulating by a rounded head with the glenoid or cup shaped cavity at the

point of the shoulder blade. Its lower extremity which is directed backward, terminates in two condyles receiving between them the head of the forearm, which is composed of the radius (*g*), and the elbow or ulna, The latter bone has a long projection above and behind the upper joint and forms the point of the elbow, to which some powerful muscles are attached for extending the arm.

The knee or carpus is a complicated joint, uniting the forearm to the cannon bone, and is composed of six small bones, (*i-q*) interposed between the upper and lower portions of the front leg. They are: The pisiform (*i*), lunar (*m*), cuneiform (*k*), scaphoids (*l*), trapezoides (*o*), magnum (*p*), and unciforme (*n*).

The true carpal bones are seven in number, six of them being placed in two rows, each containing three bones, in front of the joint and the seventh, the pisiform, being situated behind them, forming the point of attachment for some of the muscles of the arm, and otherwise aiding in the protection of the tendons running down behind the leg. Besides the advantage of distributing a shock over several distinct parts, there is another object to be gained by the interposition of these small bones. The bending of the leg at this point can be carried so far that a very wide opening between the bones of the forearm and the cannon bone would necessarily be the result; and this would take place at a part extremely liable to external injury. By the presence and arrangement of the interposed carpal bones, this wide opening is replaced by three narrow ones, which are well protected from all ordinary dangers by being covered with a capsular ligament, extending from the radius above, to the shank below them. A large flat knee has always been considered a valuable point in a horse, and from what we have shown of the action of this joint, the advantages of its possessing a considerable extent of surface will be sufficiently evident.



Below the knee is the cannon bone (*r*), which articulates at its upper extremity with the lower row of the bones of the knee and at the other end with the upper pastern. It is the the principal bone of this portion of the leg and almost entirely devoid of any muscular covering, those parts of it which are not hidden by tendons, being only protected by skin. This bone is nearly straight, rounded in front, and flattened or slightly concave behind.

The splint bones (*s*), are situated behind the cannon and a little on each side of it. Throughout their length they are united by cartilage and ligaments to the cannon bone.

The next two bones are the upper (*u*), and lower (*v*), pasterns. They have considerable motion on one another to allow the foot to be bent back.

Behind the fetlock joint, which unites the cannon bone with the upper pastern are two supplementary bones, termed sesamoids (*t*), they serve to protect the back of the joint and some important ligaments passing over it.

The toe is formed by the coffin bone (*w*), which is surrounded by the horny hoof. Another small bone called the navicular (*x*), is found behind and partly within the junction of the coffin and lower pastern, and like the former bone is enclosed by the hoof.

Beginning at the upper extremity of the hind limb, the first bone to be noticed is the femur (*y*), or upper bone of the thigh. It is exceedingly strong and stout; it is short for its bulk, which is further augmented by several large projections or trochanters placed lengthwise for the attachment of some important muscles. The upper extremity of the femur has a distinct rounded head, on the inner side fitting into, and articulating with the acetabulum or bonyc up formed at the junction of the three pelvic bones. But the lower end of the bone bears two prom_inences, which fit into corresponding depressions in the next bone and in front of which is placed the patalla or knee cap, together making up the stifle joint of horsemen, or, more strictly speaking the actual knee of anatomists.

The thigh consists of two bones, the tibia (*a*"), and the fibula (*b*"). The tibia extends from the stifle joint to the hock. The fibula is placed behind the outer side of it, extending from its upper extremity to about one third of its length. It is attached to the larger bone by cartilage and in general character agrees with the ulna of the front leg.

The hock (*c*"-*h*"), is an important and somewhat complicated joint. It corresponds with the ankle and heel in man, although in the horse it is at some distance from the ground. Like the carpus, the hock (*tarsus*) consists of several small bones interposed between the long ones of the lower part of the limb. They are six in number: The os calcis (*c*"), astragalus (*d*"), cuboides (*e*"), navicular (*f*"), outer cuneiform (*h*"), middle cuneiform (*g*"). As the great toe is not represented in the horse, the inner cuneiform is not developed.

The os calcis or heel bone forms the point of the hock. It acts as a lever to straighten the joint and is moved by the achilles tendon and

other tendons arising from the muscles which spring from the upper part of the limb.

The remaining or metatarsal bones are named like the corresponding bones of the front leg.

COMPARATIVE VIEWS OF THE SKELETON OF HORSE AND MAN.

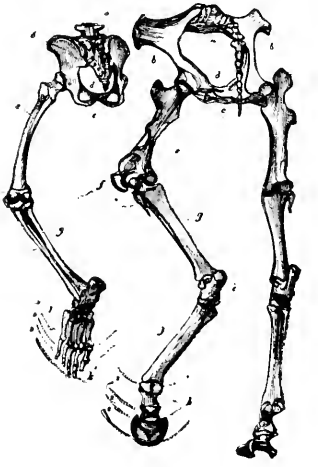
In plate we have given a comparative view of the two skeletons in as nearly as possible the same attitude. It will be observed, that besides the greater length of jaws and neck in the horse (although the number and arrangement of the bones in these parts are the same in both skeletons), the principal difference consist in the form of the extremities and the uses, to which they are applied. Man rests on the entire length of the foot and his hands and fingers are constructed for grasping. The horse on the contrary is supported on the extreme points of its toes and fingers, reduced on each limb to a single digit and protected by the nail becoming modified into a hoof.

Many of the bones in each skeleton are known by the same name, but some parts of the limbs in the horse have been strangely miscalled. We have thought it desirable therefore, to give in parallel columns the names of those bones and joints, which although exactly corresponding in man and horse are spoken of under different titles in the ordinary description of the two skeletons.

NAMES COMMONLY APPLIED TO CORRESPONDING BONES IN MAN AND HORSE.

MAN.	FRONT LIMBS.	HORSE.
Arm. (Humerus)		Humerus.
Forearm.		Forearm (Radius)
Wrist. (Carpus)		Knee (Carpus)
Hand (Metacarpus)		Cannon and Splint
Knuckles.		Fetlock joint.
Fingers.		Pasterns and foof.
MAN.	HIND LIMBS.	HORSE
Thigh. (Femur)		Upper bone of thigh.
Knee		Stifle joint.
Leg.		Thigh.
Ankle. (Tarsus.)		Hock (Tarsus.)
Heel.		Point of hock.
Foot (Metatarsus.)		Cannon and splints.
Ball of foot.		Fetlock joint.
Toes.		Pasterns and foot.

THE BONES OF THE PELVIS AND HIND LIMBS OF MAN AND HORSE ARE COMPARED;

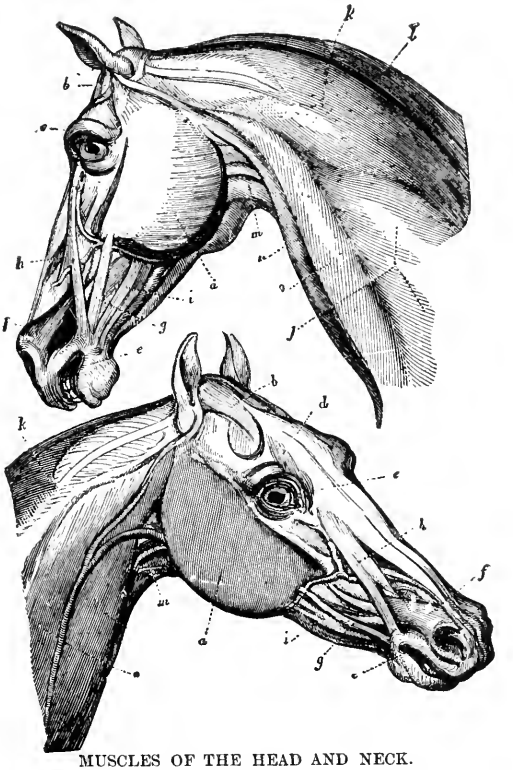


(*a*) Sacrum.
(*b*) Ilium.
(*c*) Ischicum. } Pelvis.
(*d*) Pubis.
(*e*) Femur.
(*f*) Patella.
[*g*] Tibia.
[*h*] Fibular.
[*i*] Tarsus.
[*j*] Metatarsus.
]*k*] Digit.
[1] Phalanx.
[2] Phalanx.
[3] Phalanx.

IMPORTANT MUSCLES.

The muscles of the head are not very numerous. The largest superficial muscle is the masseter [*a*], its action is to close the mouth. The temporal muscle [*b*], is employed in alternately raising and depressing the under jaw. The orbicularis [*c*], the levator]*d*], the orbicularis oris [*e*], the dilator naris lateralis [*f*], the zygomaticus and the buccinator [*g*], the nasalis labii superioris [*h*], the depressor labii inferioris [*i*].

Independently of the muscles for supporting the head and neck, there is a very beautiful and simple arrangement, by which those parts are kept in position when the horse is at rest. This consists of a very strong elastic ligament, called, ligamentum nuchae, it arises from the back of the occipital bone, immediately below the crest, in the form of a stout round cord it passes over the atlas, allowing full freedom of motion to the head, and is strongly adherent to the dentata, on which the principal strain from the weight of the head is thrown; it then passes backward to its attachment on the spinous process of the first dorsal vertebrae.

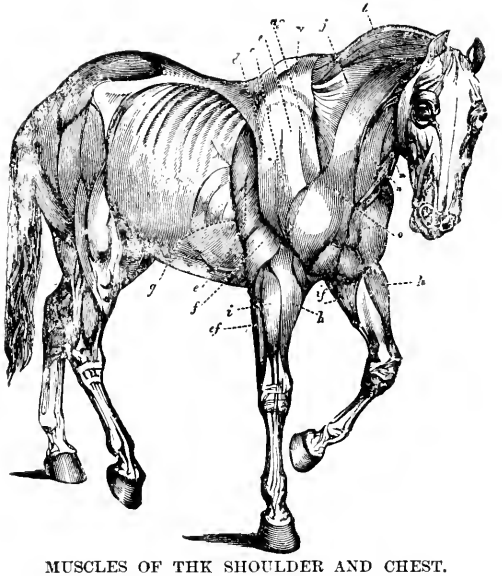


MUSCLES OF THE HEAD AND NECK.

The first muscle of the neck, providing for the lowering and raising of the head is the complexus major [*j*]. Immediately above this is the splenius [*k*], which raises the head. Behind the splenius, and extending along the superior margin of the neck is the levator anguli scapulae [1], with a reciprocal action on the neck and shoulder, according to whichever is the fixed point at the time.

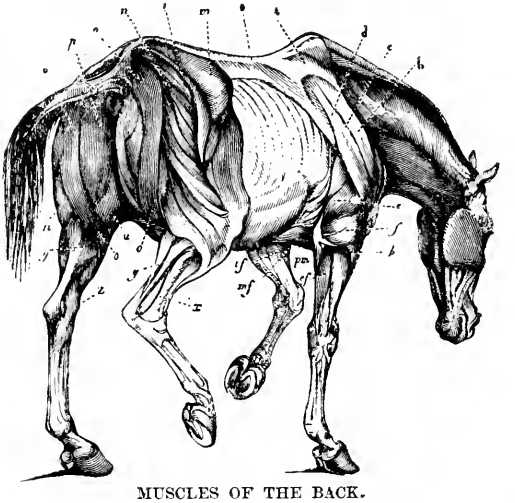
Of the muscles in front of the neck, there is first the hyoideus (*m*,) attached to the hyoid bone of the tongue, which it retracts. The sterno maxillaris (*n*), is the principal depressor of the head. Beyond the latter and extending from the back of the head and upper part of the neck, along the front of the shoulder to the top of the foreleg, is the levator humeri (*o*), a long and very important muscle, having a double function to perform, the principal one being the raising of the shoulder, and the other the depressing of the head.

Of the muscles of the shoulder we may first notice the trapezius (*x*) its office is to raise and support the shoulder, assisting the serratus major (*g*). The antea spinatus (*b*), extends the bone forward, while the postea spinatus (*c*), draws it outward and raises it. Behind the latter is the teres minor (*d*), or little pectoral; it draws the shoulder towards the breast. The pectoral major (*pm*), is an important muscle and pulls



MUSCLES OF THE SHOULDER AND CHEST.

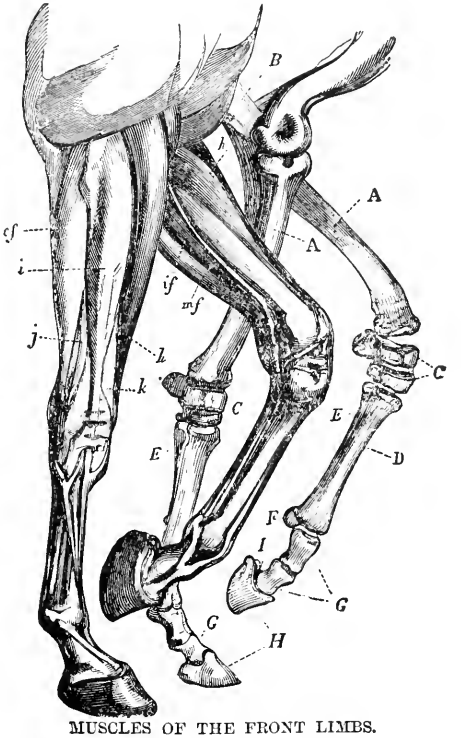
the whole foreleg, inward, insuring an even and regular action of the limb. The anconaeous longus (*e*), and the anconaeous externus (*f*), straighten and extend the forearm.



MUSCLES OF THE BACK.

The muscle most important in the back is the latissium dorsi (*). it covers the whole back, extending from the shoulder to the haunch and is strongly attached to the processes of the vetebrae and the ribs. This muscle is the principal one employed in raising the fore or hind quarters in the act of rearing or kicking.

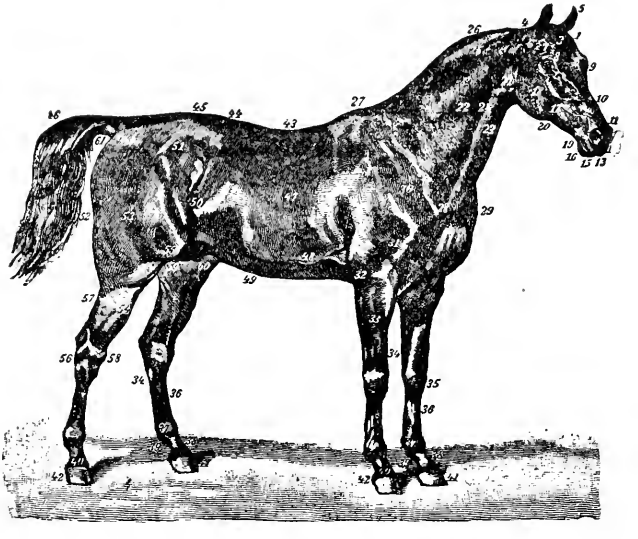
The muscles of the front limbs are, the extensor carpi radialis (*h*), extensor digitorum longior (*t*), extensor digitorum brevior (*j*), abductor pollicis longus (*k*), external flexor (*ef*) middle flexor (*mf*), and internal flexor (*if*).



MUSCLES OF THE FRONT LIMBS.

The muscles of the hind quarters are, the gluteaus externus (*l*), gluteaus medius or kicking muscle (*m*), triceps femoris (*n*), this muscle has enormous power in propelling the animal forward, biceps (*o*), semimembranosus (*p*). musculus fasciae latae [*q*]; this peculiar muscle binds down and secures the other muscles in front of the haunch. The rectus [*r*], and the vastus externus [*s*] are powerful extensors of the tibia, the gracilis [*u*]. The extensor pedis [*v*], the peroneus [*w*], the flexor pedis [*x*], the gastrocnimi [*y*] and the flexormetatarsi [*z*].

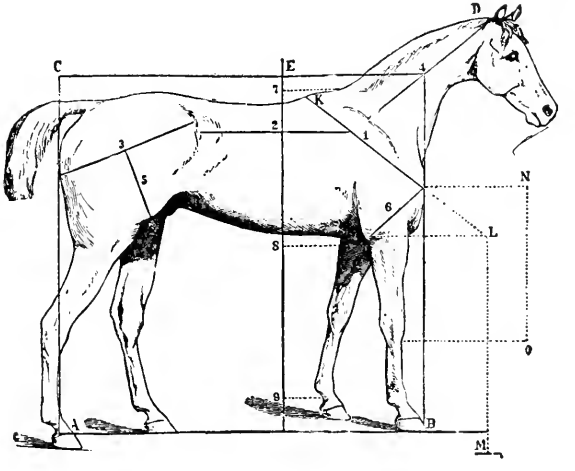
MUSCLES OF THE HIND QUARTERS.



EXTERIOR CONFORMATION OF THE HORSE.

EXTERIOR CONFORMATION OF THE HORSE.

1. Front of forehead.
2. Forehead.
3. Forelock.
4. Poll.
5. Ears.
6. Temple.
7. Eyepit.
8. Arch of eye.
9. Eyes.
10-11 Nose.
12. Nostrils.
13. Mouth.
14. Upper lip.
15. Lower lip.
16. Chin.
17. Cheek.
18. Jaws.
19. Chin groove.
20. Throat.
21. Parotid glands.
22. Neck.
23. Gullet.
24. Place where the operation of bleeding is usually performed.
25. Crest.
26. Mane.
27. Withers.
28. Breast.
29. Point of shoulder.
30. Shoulder.
31. Arm.
32. Elbow.
33. Forearm.
34. Warts.
35. Knee.
36. Cannon.
37. Upper pasterns.
38. Lower pasterns.
39. Fetlock.
40. Coronary.
41. Hoof.
42. Heel.
43. Back.
44. Loins.
45. Croup.
46. Tail.
47. Ribs.
48. Position for saddle girth.
49. Belly.
50. Flanks.
51. Hips.
52. Hind-quarters.
53. Buttocks.
54. Thigh.
55. Stifle joint.
56. Hock.
57. Achilles tendon.
58. Angle of hock.
59-60. Sheath.
61. Rectum.



The horse fitted in this square measures far more in length than in height, the lines 1, 2, 3, 4, are equally long; the total length (*C, D,*) shows the harmonious proportion between forehand [*E, D.*] and hindhand [*C, E,*].

The length of the shoulder [*N, O,*] reaches far below the knee, the length of shoulder and forearm (*K, L,*] together surpass the length of the extremities, [*L, M,*].

The forearm [*6*] and the femur [5] have the proper position and the desirable height is marked by the line 8-9.

THE HORSES AGE.

Closely connected with the anatomy of the horse, is the doctrine of the horses age, ascertained by the appearance, condition and changes of the teeth.

A mere theoretical learning, even a most thorough one, will in no instance suffice to give a clear conception, of how the horses age can be ascertained, with any degree of certainty; but a careful practical observation, in connection with the former, will enable us to tell the age of the horse correctly, at least up to the time when the horse is so old, that a few years more or less, would neither add to, nor deduct from its value or usefulness.

The number of teeth in the full grown horse are 40: Upper jaw; incisors 6 [2 nippers, 2 middle teeth, 2 corner teeth, 2 tusks and 12 molars. Lower jaw; the same. The mare lacks the four tusks, or possesses them only in a rudimentary state.

In speaking of the age we shall not mention the molars.

The incisors appear first in the shape of the milk tooth which is of a regular conical formation and has almost in the centre a narrow contraction called the neck, they are whiter and smaller than the horse teeth.

The colt is born with or receives in the course of two weeks after birth, the nippers; in four or six weeks the middle teeth and in four to six months the corner teeth.

At the age of one half year the jaw of the colt is full. At one year the edges of all incisors are partly worn by friction and the inner edge of the corner teeth alone remain uninjured. At two years the mark of the nippers and middle teeth are worn down and at the age of two and one half years the teeth begin to change.

The marks or cups in the horse tooth are of a depth of three lines in the lower jaw, and of six lines in the upper jaw. One line of which is worn off each year from the time when the tooth comes into friction.

With 2 1-2 years, the horse nippers break through and come into friction at 3. With 3 1-2 years the middle teeth break through and come into friction at 4. With 4 1-2 years the corner teeth appear and come into friction at five. At this age the horses jaw is full; the tusks making their appearance between the 4th and 5th year.

At 6 years the marks in the nippers of the lower jaw, have disappeared. At 7 the middle teeth of the lower jaw have lost their marks.

At 8 the corner teeth in the lower jaw are without marks.

The marks of the lower jaw having vanished, we now turn to the upper jaw, where marks are still visible.

At 9 years the marks of the nippers in the upper jaw disappear and an incision is found in the corner tooth. At 10 the mark in the middle teeth of the upper jaw is worn off and at 11 the mark has also left the corner teeth.

At 12 years the corner tooth of the upper jaw shows an incision of increased size. At 13 the nippers and middle teeth of the lower jaw have become perfectly rounded and the tusks are blunt. At 14 the corner tooth of the lower jaw becomes rounded.

At 15 the nippers in the upper jaw are rounded. At 16 the middle teeth assume the same appearance. At 17 the corner teeth of the upper jaw are also rounded. At 18 the nippers in the lower jaw are triangular. At 19 the middle teeth in the lower jaw are tringular. At 20 the corner teeth of the lower jaw assume the same form.

At 21 the nippers of the upper jaw have become triangular. At 22 the middle teeth of the upper jaw have the triangular form. At 23 the corner teeth in the upper jaw have the triangular shape.

At 24 all the teeth begin to assume a revérsed oval shape.

The formation and the change of the horse's tooth is subject to irregularities, resulting from the varieties of food, which they grind on pasture and in the stable and they are also subject to the results of habits, which the horse contracts, such as cribbing, biting the manger etc.

Lecture III.

THE SADDLE.

The saddle is intended to give comfort and security to the rider. In weight and construction it must be adapted to the purpose which it is to serve.

With the exception of a variety of systems, adopted by different countries for the army, the English saddle is used universally, both for men and women.

The tree or frame consists of wood or leather and steel, and is more or less elastic. The best and most serviceable covering is pig skin.

The padding is made of wool or hair and should fit the horses back as accurately as a plaster cast.

White or yellow webbing and plaiting of cord or leather, furnish the best material for girths.

The size of the saddle should be in proportion to the weight of the rider, and horses with sensitive backs should carry longer saddles, than would otherwise be necessary.

There are two ways of diminishing the weight of the saddle, without reducing the dimensions of its inner surface. One method consists of extending the tree or other parts over the points, which are exposed to pressure, and as this pressure is exercised chiefly in perpendicular direction, it is superfluous to extend it too far downward over the ribs The second mode is to build the tree of the lightest possible material, without lessening its durability and its elasticity.

A good saddle is not padded any more, than the protection of the back against galling requires. The padding should be sewed and not tacked to the tree. A recent English invention, which substitutes compressed rubber for the ordinary padding, the so called "Panel Numnah" claims to bring the rider closer to the horses back, to be more durable and to remain always dry and cool, as it does not absorb perspiration.

The riders weight should be placed precisely in the middle of the saddle, as this is the only part, from which the equal distribution of the weight, can be effected over the remaining suface; if the rider sits too far back, he will press the cantle into the horses back, while the forward parts will shift to the front, as far as the withers will permit, and expose the latter to injury by galling.

In front, the saddle should be wide enough, not to interfere with the points of the shoulder.

The girths and stirrup straps should be attached from the middle of the tree, so as not to disturb the equilibrium of the riders seat and the horses motion.

The average weight of an ordinary mans saddle is about ten pounds, if lighter the reduction in weight is obtained at the expense of durability, and a light saddle rarely fits as perfectly as a heavier one.

The construction of the seat and saddle flaps, depends on the use, for which it is intended, and also on the weight of the rider and the length of his limbs.

The military and school saddle, will ordinarily require a deeper seat and a more straightly cut flaps, than the steeple chase or cross country saddle.

On hunting saddles, the puffs, which are intended to add to the security of the seat, are frequently dispensed with and not without good reason, as a rider who has for one or the other of many causes, been thrown forward on the horses neck, will be able to regain his seat more easily without the saddle puffs, which in this case would only prove a hinderance and a cause for delay.

The womans saddle has within the last ten years undergone many changes in form and inner construction, and in its present shape, the English side saddle meets in every respect the demands on safety, elegance and durability.

THE BRIDLE.

The bridle is calculated to hold, guide and control the horse and to enable the rider to bring the horse in that position, of equilibrium, which will facilitate the carrying of both the horse itself and the rider.

Which of the large variety of briddles is to be used, depends largely upon the individuality of both horse and rider.

The bits used in riding are: the snaffle and the curb, in their various constructions and combinations.

The simplest, easiest bit and the one, used in the first stages of education of horse and rider, is the snaffle. It consists of two pieces of steel, linked in the centre, with rings on both ends for the attachment of the head-stall and reins. and sometimes bars are attached on the sides, upward and downward of the mouth piece, to prevent the shifting to one side, or the slipping of the rings into the horses mouth. The snaffle acts upon the corners of the horses mouth and should lean against the latter without gagging.

The most common varieties of the snaffle bit are: The simple or school snaffle, the racing snaffle, the double snaffle, the unevenly broken. The snaffle with mouth piece broken in several places, the twisted snaffle, the chain snaffle, the rubber snaffle, the robe snaffle, the four ring snaffle, and the roller snaffle.

All these bits answer one and the same purpose, and are selected with regard to the individuality of the animal, exercising more or less powerfully the pressure on the corners of the horse's mouth and the tongue.

The curb bit, consists of an inflexible mouth piece, with an elevation or port in the shape of an arch in the centre, to give more freedom to the tongue.

At the sides of the mouth piece bars are attached, the lower ones being ordinarily double the length of the upper ones.

The head-stall is attached to the rings of the upper bars, and the reins to those of the lower ones.

The curb hooks in the upper bars, are connected with the curb chain, and the lipstrap, which connects the lower third of the lower

bars, through a special link in the curb chain, prevents the horse from grasping the levers with its under lip and incisors.

The position of the curb in the mouth is two fingers above the tusks, and the action of this bit is that of a lever, to which the curb chain serves as a fulcrum.

The mouth piece may be of various shapes and thicknesses.

The levers are either straight or curved and according to their length, they act more or less powerfully.

The "Pelham", is a combination of curb and snaffle; a pull on the upper rein produces the action of the snaffle, while the lower rein acts as the curb.

We will enter more fully upon the bits, in the chapters treating on the guidance and training of the horse.

THE PRACTICAL PART OF THE ART OF RIDING.

ELEMENTARY PRINCIPLES.

It is essential, that persons who wish to indulge in horsemanship and to derive from it, pleasure and benefit to health, should form a clear idea of the fact, that their safety and comfort is dependent upon the confidence in their own ability, and, that the latter can be acquired only by the most positive knowledge of the ways and means by which the horse is controlled.

A mere general and superficial acquaintance with the management of the horse and the simple recollection of points, covering one or the other of numberless situations, with which the rider in his practical experience is brought face to face, will not be sufficient guarantee for the safety of those, who entrust themselves, to their horses, relying more or less upon the gentleness and good disposition of the same.

The pupil should be made familiar with the characteristics and peculiarities of the horse and become at an early stage inspired with the true spirit of horsemanship, including courage, determination and decisive action.

The possession of these qualities, will guide the rider in all eventualities, preserve calmness, and the principles, which have been inoculated in the rider by thorough and systematic instruction, and which have impressed themselves upon his memory, by reason of their clear understanding in their action and result, will be applied instinctively.

It is an undeniable fact, that kindness will produce the best and most lasting results in our relations with the horse, but the pupil who intends to make the horse his subordinate companion, must be impressed with the fact, that much depends upon numberless details of speech manner and action, employed under various circumstances, which exercise over the horse a much greater influence, than is commonly supposed.

Quiet, sternness and a moderate, but decisive use of the voice, should be taught from the beginning.

The rudiments of horsemanship form a basis, upon which the entire experience and practical execution of the art of riding are founded, and

the success of the whole is so strongly dependent upon the thorough comprehension of the elementary principles, that they should be dwelled upon conscientiously until mastered.

Nothing should be requested of the pupil by the master, before a thorough explanation of the lesson has been given as to its practical value and its results, and the office of each and every impression made upon the horse, should be clearly and in detail demonstrated to the pupil.

The desire to hasten the progress of the pupil, should not tempt the master to experiment with lessons, that are apt to prove a failure, but whatever the pupil demands of the horse in the systematic course of instruction, must, in every instance, be followed by response and only when the understanding between horse and rider is clearly shown in that particular lesson, the master may proceed with the next one.

Negligence in this direction, by either master or pupil, will cause delay, augment future difficulties and invariably compel them to return to the lesson, which the pupil has failed to master.

In the early stages of instruction, the pupil should be taught intelligently the causes for resistance and sometimes defence, which is rendered by the horse, in opposition to the demands of the rider, and thus learn to distinguish ill-will, sulkiness and obstinacy, from the instances, where defects in build and conformation or lack of strength and endurance, make obedience an impossibility, at least for the time being, and in this way the pupil will learn to discriminate between the use of severity and kindness.

Throughout the course of instruction, the pupil must be aware of the fact that the impressions, in regard to their strength or mildness, must be made in harmony with the individuality of the horse. The simple application of this or that impression will seem insufficient with one and adequate with another horse, and the all important cultivation of feeling in the novice, depends largely upon the fact, that he is taught from the beginning, to adapt the degree of his impressions, to the degree of sensitiveness of the horse.

The practical part of the art of riding consists of the rules, which the rider must observe for the purpose of maintaining his seat on horseback, and the rules, that teach the rider how to guide and master his horse.

Accordingly, the contents of the practical art, may be expressed in the terms, seat and guidance. The seat forms an indispensable forestudy, as it constitutes the independence of body and limbs and entire relaxation, which are conditional for a good and secure guidance and we will now give our attention to the conditions of the seat.

THE ELEMENTS OF SEAT AND GUIDANCE.

The Seat consists of: 1st. The seat in particular. The body should be placed in the saddle, where we have the feeling of being in the middle, and the limbs should embrace the saddle with the inner side of the thighs, from the crotch to the point of the knee. The pupil should sit as broadly and as deeply into the saddle as possible.

2nd. The grip: When the limbs are in the position above mentioned, their pressure against the saddle, from the crotch down to the knee, furnishes the grip or hold on the saddle. The exertion of the grip would at length fatigue the rider and exhaust his strength, and for this reason it must be reserved for emergencies, when sudden or unexpected movements or changes of direction by the horse require it.

3rd. The position. The position of a person on horseback should be easy, but erect and commanding. The carriage of the head is of importance, because of its influence upon the upper part of the body in general. Head and neck should be carried erectly and straight upon the shoulders, the latter should be dropped naturally and the upper part of the arm rest against the sides of the body. The forearm should be carried at about a right angle with the upper arm, when holding the reins.

The lower part of the limb, from the knee downward, and particularly the calve of the leg, fulfill the office of making impressions upon the flanks of the horse and are not intended to assist the rider in maintaining his seat. They should be carried in a position to allow the calve of the leg to feel the saddle flaps.

The position of the ankle and foot is of highest importance for the security and correctness of the entire seat. The rule of carrying the toes inward, which is so commonly applied by teachers of a military training and experience, does not fill the requisites of an elegant and easy position. The term "toes out and heels out," if properly understood, would be of value for the grip, facilitating the impressions with the calve of the leg and securing a better and easier hold upon the stirrup. Turn the ankle so, that it assumes on the inner side a convex shape toward the horse, while the outer side is concave; this, together with a slight depression of the heel will bring the foot in a position which prevents the stirrup from sliding under the instep, it will bring the spur at a proper distance from the flank of the horse and insure the position of the thigh, which is indispensable for a firm grip. The muscles of the calve of the leg will, through the depression of the heel, receive the requisite tension, and hardness necessary for their use.

A recent invention by Mr. Wm. H. B. Creagh with an improvement by the author, have brought into existence a stirrup which for safety, comfort and reliability, so far excels any previous devise, that no horseman can well afford to deprive himself of its advantages; the position in which this stirrup is suspended from the saddle, not only facilitates the proper position of the foot and leg, but literally compels the rider to place the lower leg and the thigh in the only correct position for rest and grip. The simple invention of a little rubber pad which may at will be removed and replaced, the proportions of the stirrup are such as to insure comfort, and absolutely guard against the danger of being caught.

In my long experience I have found this to be the only position of the leg, which under all circumstances proves satisfactory.

The position of a person on horseback, may be compared to that on a barrel, If the feet were carried under the barrel, it would be next to impossible for them to support any of the riders weight, and such a position would also loosen the grip of the thighs and bring the knee out of position.

In making use of the grip on horseback, the stirrups in their correct position, furnish a solid resistance for the foot and facilitate a greater pressure of the thighs against the saddle, and the farther they are brought from under the horse in such cases, the stronger will be their support to the rider.

The stirrup should be held under the ball of the foot, this being the position which affords the most elasticity and leverage for its various uses.

4th. The balance: This is the most important factor of the seat and consists of steadying the center of gravity of the rider in the saddle and the distribution of the weight in conformity with the horses motion. Balance should be chiefly the means of maintaing the seat and with perfect balance, the rider will arrive at the complete relaxation of all muscles, and natural grace and suppleness, which is so much admired and so rarely found among persons. who for lack of balance, are obliged to cling to their horses rigidly.

Stiffness prevents the fine feeling, so important in hand and seat, which in equestrianism is as indispensable, as the ear in music.

The overtaxation of the body extends invariably to the brain and prevents the rider from discriminating thoughtfully in the use of the impressions to be made on the horse.

THE GUIDANCE.

The practical method by which we make ourselves understood to the horse and the impressions, by which we influence and control its carriage and movements, constitute the guidance.

The rider communicates with the trained horse by means of aids and devides the horse for the purpose of guidance into two parts: The forehand, or that part of the horse situated forward of the rider, is controlled by the aids of reins; the hindhand, or that part back of the rider is under the control of the aids of legs.

The aids of reins control the carriage and position of the horses head and neck; they serve to stop and back the horse and guide the forehand to the right or left by pull, pressure against the neck, or both.

The aids of legs urge the horse to go forward by pressure upon the flanks and guide the hindhand to the right or left by exercising pressure upon one side, from which the horse recedes.

BAREBACK RIDING.

No practice will give to the young rider such perfect balance, independence of the horse's motion and feeling of being at home on the horse, as the riding without saddle and reins, and where time and circumstances afford the opportunity, it should receive the most careful attention. For this purpose the horse is equipped with a vaulting

surcingle, provided with two grips and a snaffle bridle with check rein. The snaffle reins are attached to the buckles of the surcingle and their length regulates the position of the horses head.

The horse is held by the teacher at the longe, a line of about 21 feet in length and the pupil is now mounted or if possible, vaults upon the horse's back.

While standing still, a series of gymnastic exercises with body, arms and legs, should be gone through, to make the pupil familiar with his new position.

The horse is then urged to walk by the sign of the teachers whip, starting upon the right hand, that is to the right, and the same exercises of body and limbs are executed.

After a change from the right to the left and the repetition of the gymnastics in the new direction, the horse is again made to change and is now started at a very small trot, during the commencement of which the pupil may be permitted to grasp the grips of the surcingle. The same gymnastic exercises should be executed in a trot.

The object of these lessons is to establish confidence in the pupil and create perfect relaxation and balance, and grip should be entirely out of the question.

The speed of the horse therefore, should be carefully regulated, so as to permit the maintenance of the seat without any exertion on the part of the pupil and the lesson should be discontinued before the pupil tires.

When the performance in walk, slow and medium trot give entire satisfaction, the horse should be started at a moderate galop and the gymnastic exercises repeated in this gait, upon the right and left hand.

The tossing of a ball and leaps over bars raised a little above the ground, will assist in familiarizing the pupil with the actions of the horse under various conditions.

Vaulting, or leaping on and off the horse, while in motion, adds greatly to the agility and fearlessness of the rider and the knowledge of the same, frequently proves to be of valuable assistance in practical experience.

THE MOUNTING AND DISMOUNTING.

The horse is equipped with the snaffle bridle and is saddled. The pupil places the horse in the centre of the ring, straight upon all four legs and perpendicularly to the wall, standing directly before and facing the horse, while doing so and holding the snaffle reins closely by the horses mouth, one in each hand.

The next function to be performed is the examination of bridle and saddle as to their condition and adjustment.

Reins and headstall should be of sound condition and the snaffle bit should rest against the corners of the mouth without gagging.

The stirrup straps, billets and girths of the saddle, should be whole and the latter lie smoothly around the horse, about the width of two hands behind the elbow; farther back, the girths would encircle the

false ribs and with the relaxation of the body, after a short time become loose. The girths should be so tight as to permit the passing up and down of a flat hand between them and the horse; too tightly girthed horses often resent the pain caused thereby, by overthrowing themselves or by buck-jumping, and too loose a saddle is not only liable to turn during the act of mounting, but its unsteady position may cause galling and soreness of the withers or back by friction.

The adjustment of the length of the stirrups now requires our attention,

Starting on the left side, the pupil stands by the left shoulder of the horse and passes the left arm from above through the left rein, leaving it to hang over their elbow.

The right hand pulls down the left stirrup and places the stirrup iron into the left hand, where it is held from underneath by four fingers. The right arm and hand is now laid outstretched upon the stirrup-strap and the foot plate raised under the right arm pit by the left hand. The length of the stirrup should cover the distance from the tip of the middle finger of the right hand, to the arm pit.

After the final measurement has proved the correctness of the stirrup, the latter should be carefully lowered by the left hand to its hanging position, because the throwing down or dropping of the stirrup iron, may cause it to strike against the side of the horse and frighten the latter.

The pupil now proceeds to adjust the right stirrup in exactly the same manner, exchanging right for left and left for right in the use of hands and arms.

Then the position before the horse's head is resumed and raising the same with both hands, a final glance at both stirrups will convince the pupil of their equal length.

The preparations for mounting are now completed and the pupil steps closely to the horses left shoulder.

The reins are laid upon the withers of the horse and the riders left hand is placed upon the ridge of the horse's neck, where the mane grows abundantly, about on the lower third of the neck, with the back of the hand downward and the palm opened and upward.

The right hand now crosses the reins through the left hand, first drawing the right one and then the left one through the palm of the left hand, sufficiently tight, to prevent the horse from moving during the act of mounting. It will be of advantage, to have the right rein slightly shorter, in order to prevent the horse's turning to the left, in case the point of the foot should touch its side when placed in the stirrup or if the riders weight should draw the horse to the left while being raised to a standing position.

After the crossing of the reins a full bunch of mane is grasped with the right hand, beginning by the roots and placed from below through the palm of the left hand and drawing it around the thumb between the middle and ring finger, where upon the left hand is closed, firmly holding the mane and reins. The advantage of holding the mane in

this fashion, lies in the possibility of releasing it instantly by simply opening the hand, if a sudden movement of the horse should require it, while the repeated twisting of the hair around the thumb may cause entanglement.

The pupil will now step backward toward the horse's head, sufficiently to permit the raising in a stretched position of the left leg, of which the foot is placed fully into the stirrup from the outside, that is the opening turned away from the horse, The latter movement should be executed without the aid of the right hand.

The rider's body is now swung around before the saddle, by aid of the hold on the mane and a spring from the right foot, and the right hand grasps the cantle of the saddle in the middle, opposite the pommel.

The left knee rests against the saddle flap and the lower part of the leg is in a perpendicular position, parallel with the right leg.

A spring from the right foot, assisted by a slight pull from both hands, brings the rider in a standing position upon the left stirrup, where he assumes an erect attitude, dividing his weight upon both hands and the stirrup. The rising into this position should be done quickly and chiefly by springing from the right foot, in order to prevent displacement of the saddle or disturbance in the equilibrium of the horse.

The right hand is now carried forward to the beginning of the saddle puff, to the right of the pommel, thus keeping the saddle in its place, and the right leg is raised straight and sidewise above the height of the horses back, then passed over the same down to the right saddle flap, where the rider pauses for a moment and then gently lowers himself into the seat.

Falling into the saddle will startle young, nervous or sensitive animals, cause them to rush forward and eventually make them rear; at all events it will inspire them with anything but confidence in the rider, and in some instances it will require days, to overcome the fear caused thereby, particularly with colts, or horses with weak backs.

Upon being seated, the right foot takes the stirrup in the manner described for the left one and the mane is then dropped by partly opening and raising the left hand and brushed down smoothly with the right.

The right hand grasps the right rein from above, inserting the fingers between the rein and the horses neck, the back of the hand turned to the latter, where upon the reins are separated and the ends turned over the index finger of each hand and the thumb being laid over the ends to prevent slipping.

The original position of the hands is the perpendicular one and the one most natural if the arm is carried resting against the body just before the hips and from the elbow forward.

The measurement of the stirrup as described before mounting is usually, but not always correct and depends upon the length of the leg, in proportion to that of the arm.

If, after mounting, we drop the stirrups and let the legs hang loosely by the sides of the horse, the stirrup plate should reach to the upper edge of the riders heel and the time has now come for the final adjustment of the same.

The reins are given crosswise into one hand, while the other on its own side raises the stirrup by pulling the end strap upward sufficiently to undo the buckle and leaving the foot to keep a slight tension upon the stirrup, we shorten or lengthen the same to the proper measure, rebuckling it with the aid of the index finger and then replace the buckle under the saddle quarter.

Care should be taken, that during this operation the leg remains outstretched and away from the horses flank or shoulder, so as not to start or disturb the horse by involuntary impressions.

The teacher will do well to assist the pupil in assuming the correct seat and position, not only by thoroughly explaining and demonstrating the same; but also by actually placing the pupils limbs and feet in the desired position with his hands.

Before going further, we would draw the attention of every pupil to a point of vital importance, that is the absolute necessity of the horses standing perfectly still, while being mounted. Under no circumstances should the horse be permitted to stir until the rider has settled on its back and only when the aids are applied, the horse should start.

Every attempt of the horse to leave the spot, where it has been placed by the rider to be mounted, should be corrected by reestablishing the original position, which should be emphasized by a most decisive use of the voice and a stroking of the forehead and patting of the neck with the right hand, while the left one holds the reins.

If half a dozen attempts and the use of kindness have proved a failure, one cut with the whip on the side, toward which the horse is inclined to move, will bring it back in the position desired and again we speak kindly and encouragingly, but firmly to the horse before making another attempt to mount.

When the rider has the left foot in the stirrup and the right hand on the cantle of the saddle, he will do well to pat the horse on the back and under the body behind the girth, to take away any fear of the touch of the foot and to inspire confidence,

The most critical moment for a voluntary start is the time, when the riders right hand has been placed on the saddle puff and the right leg is in the act of swinging over the horse's back, a sudden rush or turn while the rider is in this position may result in disaster. For this reason I recommend a pause after each movement in mounting and experience teaches, that the quiet and systematic proceeding of the rider is imparted to the horse, and the understanding between the latter and its master, will lead to satisfactory and lasting results.

Horses which show an inclination to buck, by raising their backs before mounting and such who inflate themselves against the pressure of the girths, should be backed a number of steps and then led forward again, before being mounted.

In dismounting, the rider follows the same instructions, as for mounting, reversing the order.

Lecture IV.

STARTING AND STOPPING.

When properly mounted, the pupil prepares the horse to start at the command "walk forward," by urging the same with the pressure of both calves directly behind the girth, at the same time increasing the tension on the reins by more firmly closing the fingers and a slight downward bend of the wrist.

This aid of the leg should not consist of a simple hugging of the horse's flank, but of a repeated pulsation or swinging, commencing from the knee down and executed with the heel in a depressed position.

The strength of the aid depends upon the sensitivness of the horse and the slighest degree should here, as in all cases, where aids of the legs are required be applied, gradually increasing in force, until responded to.

The horse, when urged in this manner, will throw its weight forward and take hold of the bit.

At the command "march" the tension on the reins is slightly lessened by relaxation of the fingers and the horse walks.

Upon reaching the wall of the ring, the pupil turns the horse to the right by pressing upon the right rein from the wrist and then continues upon the right hand along the wall, on the track or within one yard of the wall.

The pupil should from the beginning be cautioned against the common mistake of looking down upon his horse's neck and his hands, which in the course of time will injure his carriage and position in general, and the exhaustion, which so frequently follows at the close of the first lessons should be guarded against by complete relaxation and the avoidance of an unnecessarily tight grip upon the reins and sadddle.

The rider should see straight ahead in the direction, which he intends to follow.

By sitting loosely and deeply into the saddle the pupil should learn to feel the movements of the four legs of the horse and in the course of time to be able, to distinguish the motions of each leg, fore and hind separately. The development of this feeling is of great importance and is best and soonest accomplished by letting the pupil count "one" accompanying the lifting and setting of the four feet.

The active riding or prompting of the horses every motion, in opposition to the passive riding, or simple existence on horseback should also be insisted upon at once by adopting a certain cadence, tempo or rythm for the gait of the horse and by calling upon the pupil to maintain the evenness or cause the changes of the same.

In order to stop, the rider will again urge the horse to take hold of the bit by the pressure of both legs and then gradully increase the tension on the reins, until the horse is brought to a standstill, when the reins should be relaxed.

The distribution of the rider's weight, which will later, when treating on the guidance of the horse, be found to play a very important part among the aids of weight, is now to be considered as a means of maintaining the riders balance, the latter being at present the sole object of the lessons.

In starting as well as in stopping, the riders weight should go with the horse, leaning slightly forward in the first instance until the horse is in motion and reclining before the stop when the command "halt" is given.

In regard to commands given during the instruction, we would say, that they are necessary, when more than one rider is instructed at the same time, in order to insure the uniform execution of the lessons and because they furnish to the teacher the proof, that the pupil is capable of prompting his horse to certain movements at a moment given by him.

The commands should also express in the way they are given, the space of time, required for their execution. Two commands are usually given, the first intended to prepare the rider for the evolution or the so called "preparatory command," the second, or executive command," for the execution.

The starting, stopping and turning of the horse, necessitate the application of the aids of the reins, legs and weight, and the executive command "march" should be given slowly and the voice, in cases, where a start or increase of speed is required, should be raised, and lowered when a decrease of speed or a standstill is demanded. This is not unimportant, because the call for decisive action or gentle and gradual impressions lies in the nature of the command and the pupil will instinctively suit the degree of his aids to the manner, in which he is called upon to give them.

After having ridden for a number of rounds upon the right hand, the pupil at the command "change" crosses the ring diagonally and arriving at the opposite wall covers an equal number of rounds upon the left hand.

It is necessary, that all lessons without any exceptions, should be divided equally upon the right and left hand, thus developing the agility of the rider in both directions.

The pupil will now change again going diagonally upon the right hand and then urge his horse into a slow trot, by increased pressure of the legs.

EXERCISES OF BALANCE IN A TROT.

The motion of the horses legs in a trot is a diagonal one, the right front leg and the left hind leg, and the left front leg with the right hind leg, being raised and set down simultaneously.

The jolting, which accompanies the trotting motion of the horse, causes the rider to be thrown slightly upward from the saddle, and the shock which he receives in regaining his seat after each step, should be lessened bythe tension of the foot upon the stirrup, the elasticity of the ankle joint and a moderate grip of the thighs upon the saddle. The use

of stirrup and grip should be limited to the amount neccesary for the comfort of the rider and the latter should endeavor to maintain his seat chiefly by balance.

The "close trot." sometimes termed "military trot," should be practiced by all beginners until their body, legs and arms are thoroughly independent of the horse's motion and the pupil is able to retain the stirrup under the ball of the foot.

The close trot enables the rider to feel and understand the motions of the horse and is the best agent for the attainment of a perfect balance.

During each lesson, the pupil should trot for a limited time without stirrups, crossing the same over the pommel of the saddle upon the horse's shoulders. Balance being the only object of this method, the rider should abstain wholly from the use of the grip, giving himself up completely to the horse's motion and leaving the legs hang loosely by the sides.

One or two rounds upon both the right and left hand will suffice at first, until the pupil has begun to feel at home in the saddle, when the time of the exercise as well as the speed may be gradually increased. If the trot without stirrups is continued too long or too violently, the pupil will become exhausted and the benefit of this most valuable exercise is lost.

During the turns around the corners, the riders weight should be sufficiently brought toward the inside or centre of the ring.

THE AIDS.

The aids, which control the carriage, the position and the movements of the horse are based upon the law of gravitation, the action of the centrifugal and centripetal forces and the force of leverage.

They are applied, with regard to the anatomical construction and the understanding of the horse, and consist of the aids of reins, legs and weight,

We divide the aids of reins and legs into the in and outside-aids, calling the side toward the centre of the ring, or that side, toward which the horse moves, the inside; the other, near the wall, or the one, away from which the horse moves, the outside.

The inside rein performs three functions; First it is the "rein of connection" it should maintain an uninterrupted communication, between the riders hands and the horse's mouth, depending as to the amount of tension, upon the individuality of the horse. All impressions of the inside rein is given directly backward and it should lean against the lower third of the horses neck, there being no instance in the art of riding, where the inside rein is pulled away from the neck. It tends in its position to steady the lower part of the neck. Second, it is the "rein of position." Its fixes the head in its vertical and lateral position and controls the flexions of the neck. Because of the former two functions, it is also, third, the "rein of guidance". It prepares the forehand for all evolutions by giving the head and neck their desired position and begins in so doing the guidance of the horse.

The outside rein has many duties to perform and varies greatly in tension and position, It is instrumental in making the horses mouth sensible to the impressions of the bit and in creating the desirable activity of the same, by alternately taking and giving, that is pulling and letting loose. It is the means of preventing a false or crooked position of the head or flexion of the neck, by counteracting the effects of the inside rein. It elevates the neck and is used as an aid of weight in guidance, by its pressure against the neck, A very important office of the outside rein lies in its action upon the hindhand; a pull of the rein away from the neck, thai is backward-sidewise, will have in consequence the movement of the hindhand in the opposite direction.

One rein must not be pulled, without the resistance of the other sufficiently, to prevent the shifting of the bit in the mouth.

The aids of legs control the hindhand of the horse by pressing either combinedly upon the flanks and by so doing cause the forward motion, or by moving the hindhand sidewise, making it recede from the pressure of a single leg.

The centrifugal force tends, during the act of turning, to throw the hindhand out from the centre of the circle, on part of which the horse turns, thus depriving it of the support of its hind legs and the danger of slipping and falling, which is caused thereby, increases with the speed.

In order to secure the equilibrium of horse and rider and the safe execution of any turn, we must create a centripetal basis or pivot by approaching the centre of the curve, on which the horse turns, with the inside hind leg, doing so in an increased measure, the shorter and the quicker the turn is to be executed. The outside, leg of the rider is for this purpose applied behind the saddle girth and thus we compel the hindhand to describe a narrower circle, than the forehand, assisting the function of the leg by that of the outside rein in the manner described above.

The tension required for the aids of reins increases with the speed and the maintenance of the tempo or rythm, is dependent upon the urging aids of the riders inside leg applied upon the girth,

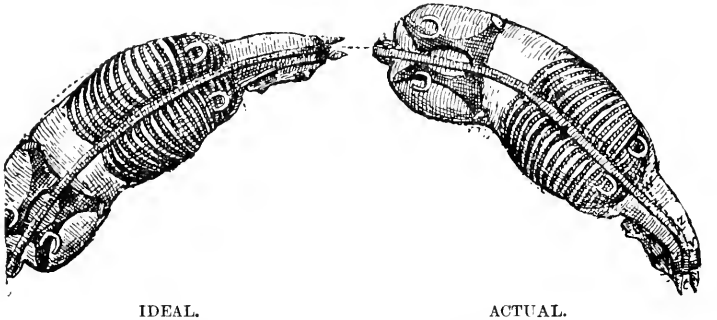
Before all turns, the gait should be shortened without altering the tempo, that is by causing the steps, or strides to be higher and shorter through a more forcible application and more frequent repetition of the aids of legs and an increased tension of the reins.

All turns should be executed gradually, that is, on a curve of at least the length of a horse, or three paces, because too short, abrupt or violent a turn would be apt to sprain and injure the horse and eventually throw it.

We will adopt the following formula for the simple turning of the horse: The inside rein commences to turn, the outside rein governs the radius of the circle, on part of which we turn, the inside leg urges the horse during the act of turning and the outside leg prevents the croup from falling out and establishes the centripetal basis in the turn.

The riders weight should be kept in perfect balance with the horse, by inclining toward the inside of the turn.

Seen from birdseye view, the horse, from head to tail should be bent throughout as the line, on which it turns.



IDEAL. ACTUAL.

CURVES OF HORSES BODY DURING TURN.

The various functions and results of the aids are best demonstrated to the pupil, when the horse is at a standstill, and we will begin this by demonstrating first the guidance of the forehand.

The position of the riders hands as we have already said, should be vertical and close together, so as to enclose and steady the horse's neck in its lower parts, between the two reins. The distance at which the hands are held from the riders body, depends entirely upon the position of the horse's head and neck, and should be such, that the horse can be controlled and brought to a standstill, without compelling the hands to move backward or past the riders sides. If a horse carried its neck low and the head and neck fully outstretched it will be necessary that the rider should hold the reins so short that a sudden raising of the neck and bending in of the head, will not find him unprepared and with his hands at his hips, but if the horse's neck is originally well elevated and the head drawn in the vertical position, the hands may be carried within four or six inches of the body and the tightening of the reins, by simply closing the hand more firmly and a slight downward bend of the wrist, will suffice to stop the horse.

The carriage of the horse is of great importance for the equilibrium of its body and consequently for the safety of the rider. A correct position aids in balancing the horse and facilitates the management of the same,

Experiments made by General Morris of the Imperial French Cavalry, aided by the well known master and author Baucher and the veterinarian Bellanger, very clearly demonstrate the distribution of weight in the horse's body in different positions as follows:

Two platform scales are used for the purpose and placed closely together; the front legs of the horse are placed on one, the hind legs on the other scale so that the diagonals drawn from the right front leg to the left hind leg and from the left front leg to the right hind leg, cross just above the division between the scales.

The specimen is a little saddle mare, pretty regularly conformed, except that the head and neck is slightly heavy in proportion with the rest of the body; she was saddled and bridled and held immovably; the scales showed the following results: Forehand, 446 9-10. Hindhand, 370 3-10 lbs. Total weight, 817 2-10. lbs. Overcharge of the Forehand, 76 6-10 lbs or 1-11 to 1-10 of the total weight.

There was a swaying of the scales of 6.2 to 10.6 pounds, which was caused by the motion of the internal parts, resulting from respiration and which favored alternately fore and hindhand.

Now the mare's head was lowered until the point of the nose was on a level with the chest, the result was: Forehand, 463 9 10 lbs. Hindhand, 353 3-10 lbs. Total weight, 817 2-10 lbs. Overcharge of the forehand, 110 6-10 lbs. or 1-8 to 1-7 of total weight.

When hereafter the head and neck were elevated until the point of the nose had reached the height of the withers, the scales indicated thus: Forehand, 429 9.10 lbs. Hindhand, 387 3-10 lbs. Total weight, 817 2-10 lbs. Overcharge of the forehand, 42 6-10 lbs. or 1-20 to 1-19 of total weight.

Those results show clearly the overcharge of the forehand and demonstrate, that the centre of gravity does not fall in the centre of the rectangle, which is formed by the lines connecting the four feet of the horse. They also prove, that the more the horse's head is elevated, be it by natural conformation or the riders hand, the more equally the weight of the head and neck will be distributed over all four legs of the horse.

It follows, that for the safety of the rider as well as for the preservation of the horse's front legs, the rider should unload the forehand as much as possible, by drawing the weight of the head and neck upward and backward. The pupil will therefore raise the horse's neck by the elevation of both hands and then lower the horse's head in the vertical position by an increased tension of both reins and a lowering of the hands. It is to be remarked here, that it is not the duty of the rider to bring about the desired position by main force, but by giving the reins more or less tension and waiting the yielding of the horse, after which they are to be relaxed.

The position of the head and neck is of vital importance for the control of the horse, and the flexibility of these parts depends upon the angle formed by the head and neck and upon the angle under which the rein operates upon the mouth. If the horse's head and neck are outstretched to their full length as it is seen with race horses at full speed, the horse is beyond the immediate control of the rider and this applies more or less to all positions of these parts where the angle is obtuse or more than 90 degrees. The same may be said of the position which is caused by the neck being curved downward from the withers and the head bent under so that the horse's mouth rests against the chest. In the first instance the angle of the reins and the horse's head will be too acute, in the latter case too obtuse to have the leverage necessary for the control of the horse.

The lines formed by the horse's neck, head and reins should constitute a right-angled triangle and the face line should stand perpendicularly to the ground.

The resistance offered by the horse to the impressions of the bit which is commonly termed the hard mouth, but which originates in the stiffness of the neck and its connection with the head, is thereby broken and the forehand is under the control of the rider.

The obedience and sensibility to the aids of reins is further secured by giving the horse's head a lateral position to the right or left, sufficiently to bring the eye and nostril of one or the other side in view of the rider. In doing this the vertical position of the head must be maintained and the lateral position limited to a bend of the articulation between the atlas and the dentata, which is caused by an increased pressure upon either rein, while the other resists sufficiently to prevent a bend of the neck or a motion of the horse to the right or left.

It remains now to demonstrate the effect of the riders leg upon the flank other than for the purpose of urging the horse to go and the pupil will cause the hindhand to recede a few steps from the right and left leg alternately, preventing the horse from starting at the same time by sufficient restraint with the reins, keeping the horse's neck firmly enclosed between both reins.

We shall enter thoroughly upon the details of the above when the pupil will have advanced sufficiently to give his attention chiefly to the guidance of the horse in its more refined phases.

Equipped with a good understanding of the aids and their application taught so far, the pupil will now continue the exercises of balance, not only upon straight lines but also in the execution of a few simple evolutions requiring changes of direction.

All evolutions which the pupil is called upon to perform in a walk, both for the purpose of balance and guidance, must be executed with a view of being repeated in a trot and in a galop, and therefore the pupil should be prevailed upon to apply the aids conscientiously and to exercise as much care in the most simple as in the more difficult lessons.

The first turns which present themselves to the pupil are the four corners of the ring which must now be entered into and passed through correctly. About two horse-lengths before the corner the step of the horse is too shortened and the natural inclination of the horse to cut the corner is to be overcome by holding the inside rein more firmly against the neck and by an increased tension on the outside rein. The pull which is thus caused on both reins would tend to slacken the tempo of the walk, and for this reason we urge the horse by repeated pressure of the inside leg, which is to be continued throughout the turn. We have now arrived at the corner and turn the horse by giving increased pressure to the inside rein through a closing of the hand and a bend in the wrist so that the little finger of the inside hand points downward, backward and toward the wall, at the same time pressing gently with the outside rein against the neck, raising for that purpose the outside hand above the inside one.

The outside leg performs during the turn the duty of preventing

the hindhand from falling out by repeatedly pressing against the flank behind the girth.

After the turn has been executed hands and legs resume their original positions.

The apparent simplicity of this lesson must not lead the pupil to treat it superficially, and though the chief object of it lies in the preparation of the same lesson for a trot when it will prove a valuable means of giving balance to the rider, it also furnishes the first idea of guidance and teaches the pupil to distribute his weight in accordance with the motion of the horse.

The success of the entire instruction lies in the most precise comprehension and execution of numberless details, and the teacher must insist that the rules which are once given to, and understood by the pupil are adhered to strictly. The performance of every single detail and the final combination and harmonious application of all details will alone make the whole successful.

The pupil can of course not be expected to memorize on horseback a stock of numberless facts and details of instruction however well they may have been understood at the time when they were given; if this were possible comparatively few lessons would suffice to educate a talented pupil and this is why I insist on being thoroughly systematic in my instruction, erecting one lesson upon the other and making the possibility of one depending upon the understanding of the other.

I would compare the education of the novice to the erection of a building where one stone is placed upon the other, their position depending upon each other. We cannot build a little of the foundation, a little of the roof and insert the intermediate parts at times to suit our fancy; likewise the rider must master the fundamental principles unquestionably if he intends to make a success of that which is based upon them.

SIMPLE TURNS.

We now proceed with the straight turns to the right and left, from one wall to a point directly opposite at the other wall, such as the turn from the middle of the long wall to the middle of the long wall opposite, thus dividing the ring in two halves and through the centre line from short wall to short wall.

The commands for these turns are "right turn" or "left turn, March!" In the execution of these turns it is important that the actual turning of the horse should cover a curve of three paces or one horse length; too short a turn under the present distribution of weight over the horse's four legs, would be likley to cause a wrench or sprain, particularly when executed in gaits faster than a walk.

The diagonal changes from right to left or from the right to the left hand, must now be executed with precision; leaving one side after passing the first corner for two horse lenghts and arriving at the other side two horse lengths before the second corner.

The repetition of these exercises, together with the lessons in balancing, previously described, should be continued until the pupil has

become thoroughly familiar with their details and they should be practised both with and without stirrups.

Before attempting to turn the horse in a trot, the pupil should be able to make a distinction between the tempos of this gait.

For the ordinary exercises of balance, the slow and medium tempos are the most serviceable and the pupil may, when he has become sufficiently well balanced, allow the horse to trot freely.

During the execution of all turns the horse should be gathered to a short trot, that is restrained with the reins, to shorten the steps and at the same time urged with the legs to maintain an active tempo; by so doing the horse will be prompted to lift his legs higher and make shorter strides.

The changes from one tempo to another, by alternately urging and restraining the horse, must be practiced extensively and then the simple turns which have been executed in a walk, may be repeated in a trot, with and without stirrups,

ROUND TURNS.

When the pupil thoroughly comprehends and masters the straight turns, we proceed with the round turns or turns on circles, beginning with a large circle to the right.

For this purpose we select upon either end of the ring, a portion constituting a perfect square and in this square describe a circle mathematically correct, of which the circumference touches upon the middle of each side of the square.

Riding upon a circle requires constant turning of the horse, however slight, and the entire body of the horse, from head to tail, should be bent like the circumference of the circle on which it moves.

The aids which have been applied in the straight turns, during the actual execution of the turn, are now to be used continually and the weight of the rider inclines toward the centre of the circle.

The command for the execution of the circle is "on a large circle to the right" (left) "March!".

In changing the direction at the command "change circle" the pupil will leave the original circle, where the circumference touches the imaginary wall or open side of the square and diagonally crossing the ring will gain the other end and there describe a circle of the same radius to the left. The position of hands and legs changes as the new direction is assumed.

We next change the direction at the command "in the circle change," by describing two half circles along the diameter of the large circle of which the radius is 1-4 of the radius of the large circle. Beginning at the point where the circumference of the circle touches the wall, the pupil performs a semi-circle to the centre and there changing the position of the horse by reversing the aids of reins and legs, describes another semi-circle on the other side of the diameter, to the point opposite from where he originally started, thus describing a capital S.

It will be well, that the pupil at first should stop the horse upon arriving at the point of changing the direction and at a standstill cause the horse to assume the position required for the opposite direction, until horse and rider have been made to understand each other sufficiently, and sufficient balance has been acquired to effect these changes without any violent motions of arms legs or body.

Lecture V.

HORSE TRAINING.

The training school of the old masters does not enjoy the same universal recognition among the sportsmen of to-day, which it received, at the time when the highest achievements in horse training were popularly appreciated, and when Princes of the European Courts and distinguished representatives of society coveted horsemanship among the first of their chivalrous accomplishments.

The so called old school is almost extinct; the art of riding as a fine art degenerated and its disciples are few. The protectors and promotors of this knightly sport, have almost died out and with them the taste for cultured equitation.

The celebrated schools, from which graduated excellent masters, have almost ceased to exist, and the modern productions in the field of equestrianism, bear but a faint resemblance to the character of the beautiful art, which, sad to say, is to many but a cherished remembrance, to the majority, an idea, entirely foreign.

If, instead of blindly following an unenviable, but large majority into the field of anglomania, we do but try to search for the causes of so remarkable a change, we can easily find them in the facts, that the theories, the practical value of high school riding and a great many technical terms of the old school are superficially treated and misunderstood by so called men of my profession, who in turn flood the minds of their pupils with misinterpretations and falsehoods.

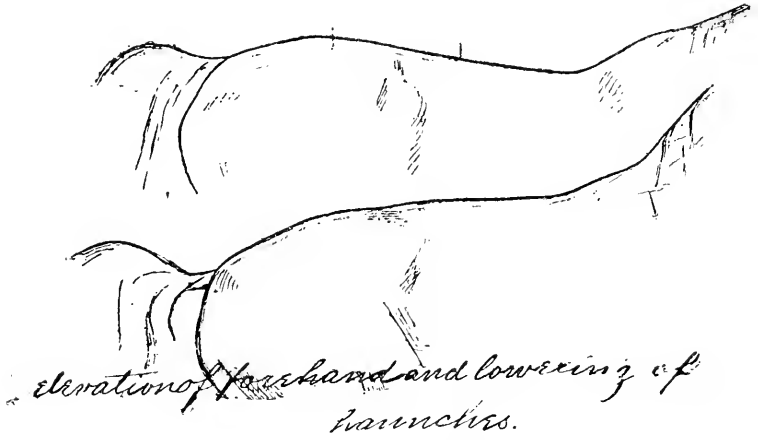
I frequently hear such expressions as; "What do we want, with high school riding, with its collected trots and little gallops? What for this everlasting ring riding, which is but a waste of time and perspiration? What we want, is speed and riding out doors and over ditches and hurdles etc."

Never having ridden a thoroughly flexed horse, not being taught better by his teacher and not inclined to study any literature on the subject or to make personal observations, the pupil lacks all comprehension of the purpose of the schools, which are only meant to be the means of developing the cross country horse.

"It is too bad, about the time lost—they say to-day—shrugging their shoulders over the Spanish trot, the time wasted over such unnecessary efforts, a thankless art, which only brings horses behind the bit" are their words. But when they have occasion to buy a horse, that shows disposition to go in the Spanish trot, or has already been educated to it, such a horse is praised as a wonderful animal, it is ridden only where the most spectators are gathered and his value is doubled. In the mean time it remains an open question, whether the horse only floats behind the rein, in consequence of weakness, or too great a tension in neck, back and haunches, or only paddles out in front dragging its hind legs after. As a rule, the latter is the case, and the horse is one, that is least adapted to go correctly according to the schools and requires enormous labor to produce active and elastic motions.

Often do we hear so called hunters spoken of in boastful tones: 'A splendid hunter," they say of many a crude disobedient animal, if only once he has rolled among the herd over a few ditches and fences, which he would have done as well without the rider simply following in the company of his kind. But how, if the rider were called upon to cover the same course alone? At the first ditch already, the horse would say "So far and no further." I call a splendid hunter that horse, which before over following the hounds, has, with apparent pleasure and well calculated effort taken obstacles of all descriptions.

It has already been mentioned, that collected gaits are thought of as being useless, but they are also said to be destructive to cross country gaits, first, because they undermine long strides, and secondly because the horse grows firmer and harder in hand. Such critics mistake the collected gaits for spoiled and shortened ones, which are produced by restraining the horse with the reins only, but without the urging aids of the riders limbs. By this, short, low and dragging movements are produced, without action and swing and freedom and least of all the desired lowering of the haunches and elevation of the forehand.



elevation of forehand and lowering of haunches.

The undesirable hardening in the hand at this occasion has two reasons, first, if a horse is only restrained in front and the hind hand is not brought forward, the entire neck is sunk and the horse becomes ever lower in front and higher in back, consequently lies in the riders hand and pulls. But this mistaken proceeding can certainly not be compared with the true collection; secondly, when both ends of the horse, head and hind hand are simultaneously gathered, a pressure is created, which manifests itself at once by a stronger leaning in the hand and an increased tension in the seat; but which is a sign, that the right method has been chosen. As soon as the ignorant horseman has reached this point, he will discontinue the lesson, thinking that, should he persist, the horse would only grow firmer and harder instead of

lighter and more pliable. But if he goes on, becoming more and more steady and passive in his hand, but all the more active in his limbs, urging the horse and gradually exercising a depressing influence upon the hind hand, he will find, that the horse will yield in both neck and haunches, becoming flexible in the joints of the same and only now the purpose of collection is achieved. The horse has through it acquired that most beautiful quality of true looseness, all muscles and joints work in free elasticity, even though this quality had by nature not existed at all.

Now the horse carries himself, the reins have but a slight tension and the moment has arrived when the rider may ride, figuratively speaking without reins, not having to fear, that his horse will roll along on his forehand, and become ruined on his limbs, which is an unavoidable consequence, when the reins were given loose by the rider, until all connection had ceased and the looseness and stretching of the entire vertebral column has been enforced by long trots and galops continued to the fatigue of the horse, in consequence of which the muscles become slack, the horse goes on its joints and each leg goes by itself.

I am sorry to say, that this system has gained more ground than one would think and we see many horses in the first month of their training in a horrible condition of unnatural conformation and strained tendons and joints, which is frequently and foolishly charged to the breeding of the animal. Of course, if one would commence the training of a crude horse, which is naturally behind the bit, with riding of collected gates, nothing more injurious could be attempted.

If we concede, that institutions, which train competent masters are growing fewer and fewer in number, it is a natural consequence, that teachers and trainers worthy of the title "master" are rapidly decreasing in proportion, and that professional positions must needs be filled with men of frequently very limited experience.

Few buyers understand it or will take the pains, of giving to their horses a thorough education, and how few have the patience or are willing to expend the money, to leave their mounts in the hands of a professional horseman for the time required. That time, necessary to give careful and complete training to a young horse without injuring the same, a training, which will last the life time of the horse, can by no means be less than twelve months.

Many are of the opinion, that highly bred horses are for ordinary use too high strung, and we must admit that there are now more horses of vehement temperament, than formerly; because first of all the causes are not so easily removed on account of the downfall of the art of riding, and secondly, because awkward hands will irritate and spoil horses so inclined. The fact remains, that a saddle horse cannot be too well bred to comply in speed, strength and durability with all requirements.

It is of course to everyone, who has a disinclination to think, more comfortable to join the chorus of professional fakirs, who hide their ignorance by denouncing every thing, which their narrow horizon can

not grasp, and to drag in the dust and ridicule that, which to accomplish they cannot even arouse their dull spirts to attempt.

The public though, who is benefited by correct instruction and well trained horses deserves to be enlightened on a subject, which is to every horseman of the greatest importance.

What does the term training a saddle horse imply? First, the physical development of the horse, such as will fit it as well as nature permits for a destined purpose. Second, the generation of strength, flexibility and endurance. Third, the development of grace and beauty of form and motion by adding to the natural faculties of the horse the refined influence of artistic training. Fourth, the creation of a perfect understanding between horse and rider, and the subsequent unconditional surrender of the first, to the will and impressions of the latter.

The term School riding and School training, the high schoool and the schools above the ground, are, though very plain and to the point, rarely understood.

They simply involve a series of schools or lessons which follow each other systematicaly according to the nature of the horse and the purpose for which it is intended. It is necesssary that we "as trainers" must understand the anatomy and the physiology of the horse in order to appreciate difficulties and obstacles which nature has sometimes put in our way.

The disposition and the degree of sensitiveness of the horse, his age and breeding must also be considered.

The existence of this or that weakness or natural advantage is next of importance.

Talents and inclinations for this or that school will lead in no slight degree to remarkable results in the hands of the trainer, who discovers them.

All horses have that, which art and training claim as their work, in them by nature and there are strictly speaking no artificial gaits.

Any one who has ever seen a horse turned loose and left to perfect freedom, must have seen the majestic movements of a Spanish trot executed by the animal, even if it had never been ridden at all.

Any one who has seen colts enjoy their youth and liberty has seen them perform pirouettes upon their haunches, such as only good riders on well trained horses could reproduce.

Furthermore we have all seen the difficult feats of the school above the ground shown by horses who, feeling the unrestraint of perfect freedom will leap and kick, rear and plunge out of pure delight. The weight of rider, the tightly girthed saddle, the bits in the mouth and the consciousness of being subject to human will, first prevent these voluntary evolutions.

It is the object in training the horse, to subordinate every faculty with which nature has so lavishly endowed it, to the comfort, use, pleasure and safety of the rider.

To those who sneer ignorantly at the Spanish step, the redop (galop on the spot) the piaffe or the capriole I would say this: why do athletes go through such exercises as air springs, somersaults and others? Cer-

tainly not to perform these feats in public or at social receptions; but because they tend to supple all their muscles and loose all their joints.

The training of the horse, like that of the athelete perfects and strengthens the entire system and every organ in all its functions and enables it to perform extraordinary work, when occasion demands it.

Some of these evolutions are so full of beauty and grace and demonstrate so clearly the purpose to which they serve, that they give delight to every intelligent onlooker, when seen at exhibitions.

The principles which guide the course of training are:

First, to bring the horse with confidence on the bit, that is, to create in the horse, the desire to go forward and willingly to accept the tension of the reins; this is the foundation of all gentleness under the saddle, and until this has been accomplished the trainer should not proceed further.

Second, the forehand of the horse should be built up, the neck and head should be elevated and the shoulders freely developed.

Third, next we begin to collect the horse and to lower its haunches advancing its hind legs under the centre of gravity, and then we flex thoroughly all parts of the horse bringing it under thorough command of reins and limbs.

It is not the purpose of this lecture to treat in detail on the course of training about which volumes could be and have been written, my intention is only, to check—if possible—the headless and senseless haste in a matter, which requires and is worthy of serious consideration.

THE TRAINING OF THE HORSE AT HAND.

The training of the horse at hand, in other words, the preparation of the horse on foot, for the service of the rider, is a branch of horse training, which in this country is almost unknown.

The value of this mode of handling is inestimable.

Young horses, unaccustomed to the weight of the rider will, when unmolested by the same, more easily understand and more willingly yield to the aids taught them by this method.

Horses, whose construction of head and neck make the suppling of the same difficult to accomplish, will be aided in their development by being relieved of the trainers weight, until these difficulties have, one by one, been overcome.

Horses, with weak backs or long pasterns will suffer less, when the training at hand has given to them that position, which enables them to carry themselves in balance, and support the rider's weight correctly, before they are mounted.

Horses, which require correction, because of the opposition which they offer to the impressions of the rider's limbs or to the spur are more easily controlled and made obedient by handling on foot, because it is next to impossible, for them to evade the influence of hand and whip under these conditions.

The causes for sprains, lameness and other injuries which sometimes accompany the training in lateral gaits are greatly reduced, if

not entirely removed, when these schools are taught first without the weight of the rider; the lessons of shoulder in, contra shoulder in, travers and renvers, which tend to increase the flexibility in the neck, ribs and haunches of the horse, make the same more obedient to aids of limb and spur, and develope the freedom of action in shoulder and haunches, are facilitated enormously.

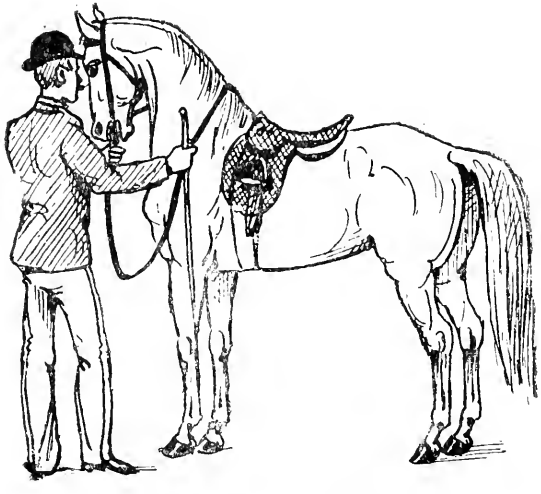
In these lateral gaits particularly, the distribution of the rider's weight plays a most important part, being of great assistance in making the horse understand the lesson and a mistake therein or the unsteadiness of the seat, at the time, when the horse is about to elevate a limb for a stride forward and sidewise, will have the setting down of that foot for an immediate consequence, often in the wrong place, resulting in interfering or injured coronaries.

The training of the horse at hand begins by placing the horse in the centre of the ring, straight, and on all four limbs; bitted, with a simple snaffle, the saddle is usually put on as if for the purpose of riding.

The trainer carries a training whip, of about four and one half to five feet in length.

The trainer stands next to the left shoulder of the horse, holding in his left hand the left rein about three or four inches from the mouthpiece, and the right rein is passed over the horses neck just before the withers, and is held by the right hand which also carries the whip, about before the middle of the left saddle puff.

With the left hand the horse's head is gradually erected, until the neck assumes a position as elevated, as its build will permit.



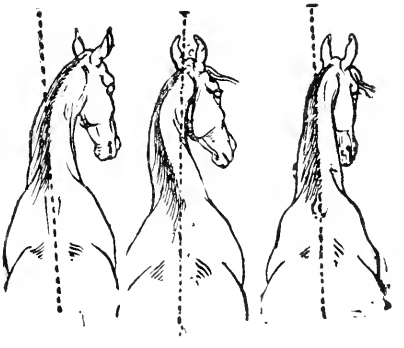
FLEXION OF HEAD AND NECK.

Then a pressure is exercised upon the horse's mouth, in order to bring its head, or rather face line, in a perpendicular position to the ground, keeping the neck so high, as not to permit the nose to descend below the line of the hip.

This lesson tends to supple the joint which connects the first vertebrae of the neck with the head.

To make the horse live and active in the mouth, and to induce the same to yield early to the pressure of the bit, the left hand moves the bit in the horse's mouth, in circular motion of about two inches in radius, and by giving immediate and perfect freedom with the rein, at each degree of obedience yielded by the horse, the latter will soon cease to resist and seek of itself the position in which it finds the comfort of meeting with a light hand.

We then proceed by flexing the next joint between the first and second vertebrae of the neck; by giving increased tension to the right rein and taking care to maintain the vertical position of the head, we obtain the lateral position of the same to the right.



INCORRECT. CORRECT.

POSITION OF HEAD TO THE RIGHT.

Thus we continue, carefully avoiding all contortion, to flex the entire neck of the horse until his face stands opposite the puff of the saddle.

The same proceeding is to be followed, flexing the horse to the left.

Due consideration must be given to natural obstacles, such as short, thick, or misconstructed necks of all kinds, and no amount of patience must be spared in overcoming each hindrance by degrees.

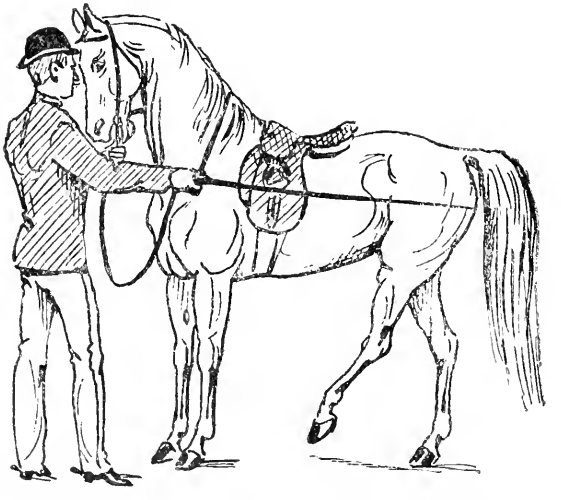
Force, would lead to making the lesson painful to the horse, undermine the understanding between trainer and horse and excite resistance on the part of the latter.

After the erect position of the neck has been confirmed, and complete pliability established, we may consider ourselves in control of those parts, and can now go on with the securing of the obedience of the hind-hand of the horse, to limb and spur.

Assuming the original position by the horse's left shoulder we teach it to recede from the touch of the whip, by applying the same to its flank, where the riders leg would come in contact with the horse, that is, directly behind the saddle girth.

This application of the whip, consists of repeated and slight vibrations, from which the horse will soon recede, stepping with its left hind leg over the right one.

This is to be continued, a single step at a time, until the horse has executed a full turn or pirouette upon its forehand.



As in every other case, each instance of obedience must be rewarded by a caress, and a pause is to be made between each step, in order to avoid the horse's rushing away from the whip.

This lesson like all others has to be practiced both to the right and left, the trainer changing his position and that of reins and whip accordingly.

Following the pirouettes on the forehand, the horse is taught to execute the same upon the hind hand.

In this lesson the trainer guides the front legs around the hind ones, directing the former, in steps latterally forward, around the latter; preventing the horse's hindhand from moving, by laying the whip against the flank on the right or to the left side, as the case may be.

When these pirouettes are thoroughly understood by the horse, we repeat the same with position and contraposition and flexion of head and neck, thus obtaining the pirouettes in the position of shoulder in, contrashoulder in, travers and renvers, with the inner front or hind leg as pivot.

Before we go any further, I wish to explain the meaning of a few technical expressions, the misunderstanding of which causes many

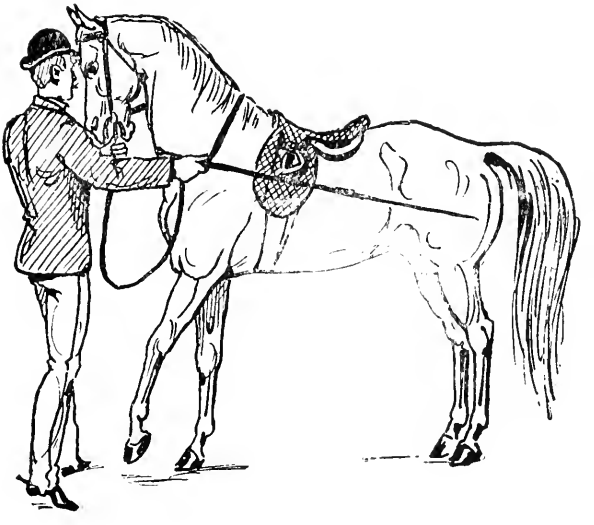
mistakes and prevents the scholar from forming a clear idea of the lesson.

By going on the right hand, we mean the motion in that direction, which if the ring were round, would constitute a circle to the right thus having the wall at our left.

Going on the left hand, we have the wall at our right.

The inner side is the one toward the centre of the ring, the outer side lies near the wall, except in the evolutions of contrashoulder in and renvers, when the inner side, like in all schools, requiring a flexion of head, neck, vertebral column and haunches, is the concave side, the outside being the convex one, regardless of the position to the wall.

The same rule applies to the terms of inner and outer rein and inner and outer leg of the horse, front or hind.



PIROUETTE ON HINDHAND.

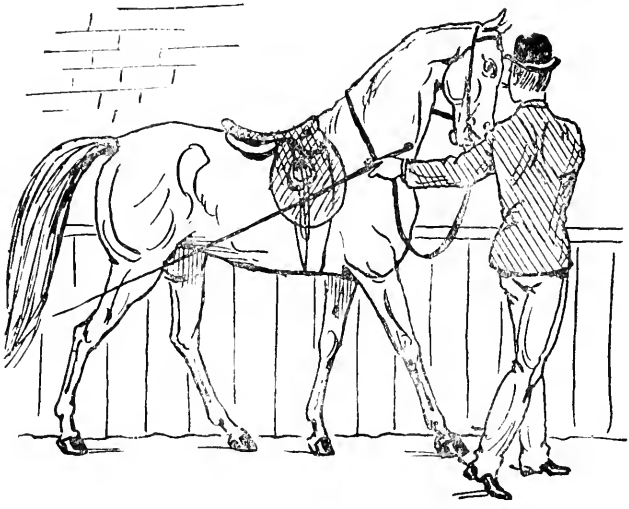
The trainer now leads the horse upon the track, that is next to the wall, and parallel with the same, on the right hand.

The right rein is held in the right hand, the left one passed over the neck and held as aforetold in the left hand, which also holds the whip, the point of which is directed toward the lower part of the horses thigh.

After erecting the horse's neck and head, the trainer begins to urge the horse into motion with the whip, touching it on the spot indicated.

Some horses will rush forward, others will back, still others will kick with one or both hind legs, all of which is harmless and will cease after a few seconds, when the horse understands that he is to go forward.

The trainer will walk along with the horse, himself stepping sidewise to the right, and if the horse has after a round or two gone willing-



WALK.

ly up to the bit, the trainer will set the pace, by either urging or restraining, until the horse walks actively and regularly.

When a corner is reached the horse must be made to shorten its steps,

COLLECTED TROT.

the tempo or rhythm remaining the same, but the motion being one with increased lifting, or action of both fore and hind legs.

In passing through the corner, the horse is to be bent in all parts, the same as the cars of a railroad train, when going around a curve,

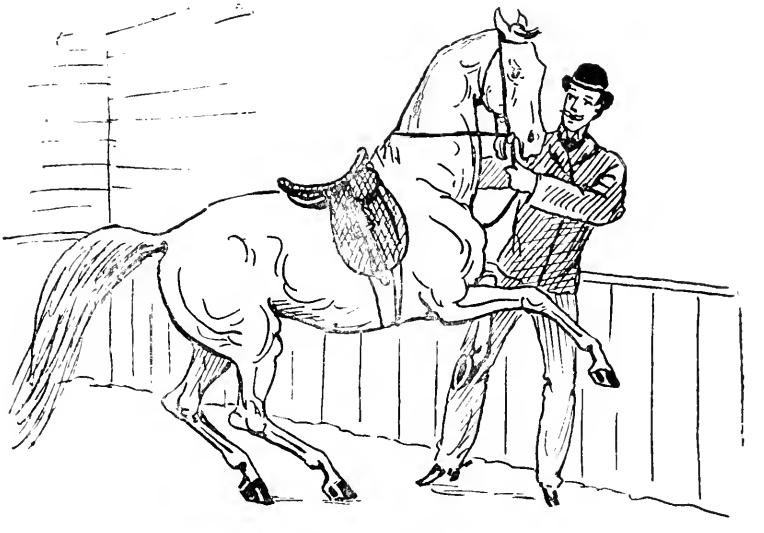
We begin now to shift the centre of gravity of the horse by degrees toward the hind legs,

Raising the neck still higher with the inner rein, we urge the horse as indicated, causing the hind feet to reach forward under the body toward the saddle girth, compelling them to support gradually more and more of the horse's weight.

Result of this will be a lowering of the horses hind hand and a proportionate elevation of the forehand and the advancing of the horse in a well cadenced, collected trot.

The time has now come to begin the teaching of the lateral gaits, the purposes of which I have already explained.

The lateral gaits are an indispensable fore study for the galop, to which we next turn our attention.



GALOP TO THE RIGHT.

The galop consists of a series of leaps the height and length of each being regulated, by the degree of collection and balance.

The first leap or the setting of the horse into the galop, should be the result of careful preparation.

After having collected the horse to such an extent, that his next motion forward would commence by an elevation of the forehand and after giving the horse such flexion and position, as is required for all evolutions to the right, or left as the case may be, the trainer will put his horse in the position of travers to the right, or left, (That is at an

angle of 45 degrees to the wall) which makes it impossible for the horse to gallop any other way, but leading with the right leg and then, with an urging aid start the horse.

The advantage of the training at hand in this case lies in the fact that the trainer can exact from his horse one leap, then pause and exact another leap, thus gaining from the start the most absolute control over each single motion of the horse, and prevent rushing or lugging on the bit.

A horse thus prepared will make work easy for the trainer who will now mount in the saddle.

The sources of resistance have all been thoroughly and in detail overcome; the horse is ready to receive a full bridle, and having been thoroughly flexed, will render no opposition to the impressions of the curb; The aids of legs which are now substituted for the whip, are already familiar and the trainer, as well as the owner who is to ride the horse, will reap the benefit of the training of the horse at hand.

Lecture VI.

LATERAL GAITS.

Evolutions during which the front legs of the horse are followed in their tracks by the hind legs, be it in a walk, trot or galop are termed gaits upon one or upon a single track.

Lateral gaits are executed by the motion of either fore or hindhand going on a second track, which lies parallel with the other and one step inward of the same toward the center of the ring. The lateral gaits are therefore also termed gaits upon two or upon a double track. As stated before, the purpose and aim of lateral gaits is:

A. for the horse: the increased flexibility of such joints and articulations as tend to give elasticity, spring power and grace to the animal.

The development of freedom in shoulder action and the action of the hind limbs. The obtaining of perfect understanding and response to both the aids of reins and legs in their respective functions of giving position and flexion, and in urging the horse.

The maintenance of a perfect equilibrium with the center of gravity shifted upon the haunches during the motions forward and sidewise. The preparation of the horse for evolutions, the nature of which make the obedience and proficiency of the horse in the lateral gaits conditional.

B for the rider: The creation of the finest feeling and sense of touch required to measure the various impressions by aid of which these evolutions are exacted from the horse and which must be in perfect harmony to insure the correctness of the lesson, as to tempo, carriage position, flexion, balance, and direction of movements, the correct distribution of the riders weight, over the body and into the motion of the horse in both directions forward and laterally.

The lateral gaits are: "shoulder in" to the right. The horse stands on the outer track parallel with the wall. As in all evolutions the first step to be made is to collect the horse.

Then its forehand is guided upon the inner track by moving it one step from the wall toward the center of the ring.

Position of the head and flexion of the neck to the right is then given and the horse made to recede from the pressure of the inside leg while the rider prevents the falling out of the hindhand of the horse by a pressure behind the girth with the outside leg.

The "travers" or croup resembles the shoulder in as much as the position and flexion of the horse remain the same; but in this lesson it is the hindhand which by a pressure with the outside leg is brought upon the inner track, the horse receding from the pressure of the same while the inside leg applied further forward, on the girth, urges the horse forward and prevents it from going sidewise at too great an angle to the wall.

If the travers to the right is carried diagonally from the right to the left hand and continued thereon it becomes "Renvers" to the right or contra travers to the left.

The same aids are reversedly applied for the same lessons upon the left hand.

It is of greatest importance that the forward motion in all lateral gaits should predominate over the sidewise motion to prevent the horse from interfering or stepping on its coronaries and that the riders weight should at-allevents be inclined in the direction in which the horse moves.

For the better understanding of the lateral gaits for the novice I will give the following tabular description:

Shoulder in to the right:

Forehand of horse on inner track.

Hindhand of horse on outer track.

Position of head to the right.

Flexion of neck to the right.

Flexion of ribs and haunches to the right.

Horse recedes from right leg, stepping with its right feet forward and sidewise over left feet.

Riders left leg prevents falling out of hindhand toward wall by pressure behind girth. Rider's weight to the left riders face to the right.

Travers to the right.

Hindhand of horse on inner track.

Forehand of horse on outer track.

Position of head to the right.

Flexion of neck to the right.

Flexion of ribs and haunches to the right.

Horse recedes from left leg.

Right leg urges forward.

Horse steps with its left legs forward and sidewise over the right ones.

Riders weight to the right and face to the right.

Renvers to the right or Contra Travers to the left, is the Travers to the right transposed and continued on the left hand, receiving its name, Renvers to the right from the flexion of the horse, which is throughout head, neck and body to the right; and the term Contra Travers to the left from its being the Contra position of the Travers to the eft upon the left hand.

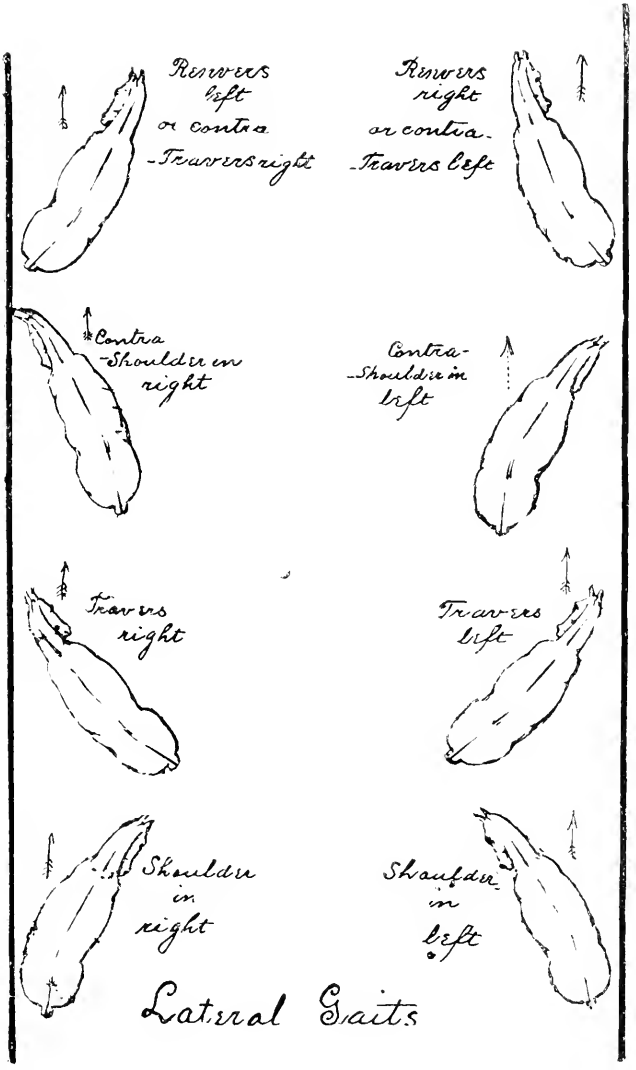
The reversed order of aids, positions and directions holds good for the same lessons executed on the left hand.

ABOUT RUNAWAYS UNDER THE SADDLE.

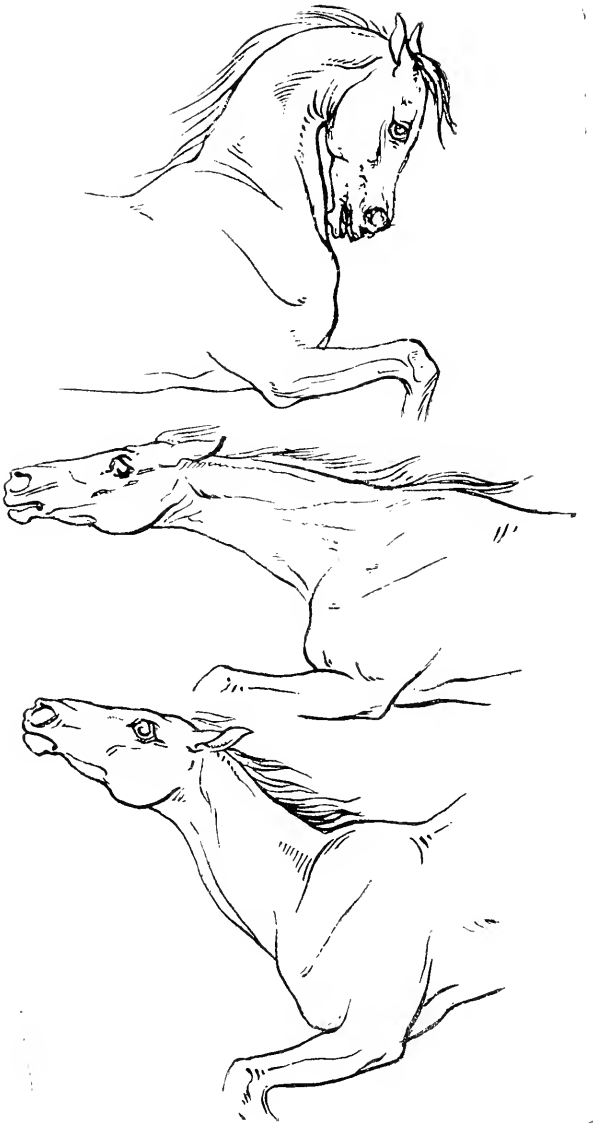
The failure to stop, the ignoring of the aids which strive to parry and the continuation of motion other, than that which is necessary to bring about the requisite collection and to overcome the continuous swing of the gait, is termed "running away."

This is applicable to all gaits, not excluding the walk.

The causes for this condition are different ones and hence the mode of correction must vary accordingly.



Lateral Gaits



It is not a rare occurrence that horses lose the feeling in their mouths in consequence of a strong, incessant pressure upon the jaw and tongue.

This has its cause in the suppressed circulation of the lymph and its reflex action upon the afferent nerves.

Such horses, before entering into this condition have suffered great pain by which they become benumbed, a state, which is augmented considerably by the rush of blood to, or the congestion of the brain.

Horses so affected are seen to run away unconsciously with their mouths wide open, their tongues blue-black, with eyes fixed and boring on the reins, in a walk, trot, gallop, or other gaits.

They stumble over whatever lies in their way, bang against the sides of the ring and run their heads against the wall.

I will here recall an incident which happened under my eyes in Brooklyn: A horse, untrained, but equipped with saddle and full bridle was brought to a riding academy for trial and with a view of being eventually handled for saddle use. After a few minutes the animal suddenly threw its nose away up in the air and reversing the neck trotted rigidly toward the wall entirely beyond the control of the rider.

Its head was so high that when he struck the wall his lower jaw and windpipe were pressed against the side of the ring and for a few moments he remained suspended between his hind legs and mouth, the front legs not touching the ground.

I supposed the horse to be seriously injured as neither strength nor any impressions of the reins could stir him out of his uncomfortable position; but after a little while he became relaxed and then went along when guided entirely by the snaffle.

A very similar appearance is offered by horses which run away, because of pain.

Through excessive flexions and extensions great pain may be caused in the muscles of the poll, jaws, neck or back by the misuse of certain kinds of reins similar to the martingal which force the horse to assume positions of head and neck, to which the natural conformation of the animal is sometimes directly opposed, and which may eventually be obtained by patient and gradual suppling of the parts involved.

These horses, too, become stupefied and rush away in the most extreme attitudes of head and neck, the latter making often all impressions with the bits a practical impossibility and the horse is running away in a walk, trot, or unbalanced galop; less frequently in a decided run.

With such horses we shall have to see, that while in this irresponsible condition they do not endanger themselves or the rider.

By releasing the reins and discontinuing the flexions, the cause will be removed.

When the pain has ceased, the circulation is re-established and consciousness has returned, the horse will again become willing and manageable

Horses which are suffering from disease of the brain, particularly

those with periodical staggers, often lose consciousness entirely after continuous fast going which has accelerated the circulation of the blood.

With a wild and fixed look and absolutely oblivious of surrounding objects they runaway in a walk, trot, or sometimes in a galop. They will run against houses, trees, over precipices and are therefore very dangerous.

The gait of these horses is characteristic; they go awkwardly and with high steps, as though they were wading through water.

Horses, which run away for want of balance are equally dangerous.

With them the motion of the trunk is faster than the motion of the legs in consequence of an overcharged forehand and too great an inclination in the gait.

They are in exactly the same attitude as a person who is fast descending a very steep hill and who is losing more and more the control over the precipitating body.

The forward moving legs are unable to overtake sufficiently fast the motion of the trunk in order to place themselves before its weight.

This difference grows wider with each step through the continuous swing of motion.

With the horse the unbalanced trot becomes a more unbalanced galop and a dead run ending finally with a fall to the ground. Its head and neck are carried low or far extended, which is usually the case. We must try to gradually elevate them; but horses may be seen which even with a very high carriage of head and neck have so much inclination forward that they too, dash away without any means of steadying themselves. By the throwing back of the riders weight, the gaining of a turn or large circle by which the effect of the continuous swing of motion may be broken, we can little by litte re-establish the equilibrium and so bring about a gradual shortening of the gait.

With all these animals, violent measures of whatever character will be of no avail; jerking with the reins and parrying between the spurs will be unsuccessful.

To direct such animals against a wall is absurd, they will injure themselves and endanger the rider.

It would also betray poor judgment to cure such horses of running away, by tiring them out and urging them to go after they have luckily escaped from serious disaster and reduced their speed.

Horses which run away on account of fright, are although at first headless and confused, not in a state of stupefaction as the two species of run-aways first spoken of; neither are they in a position, which deprives them of the command over their body or in a condition which makes the rider lose the power of making impressions upon the horses.

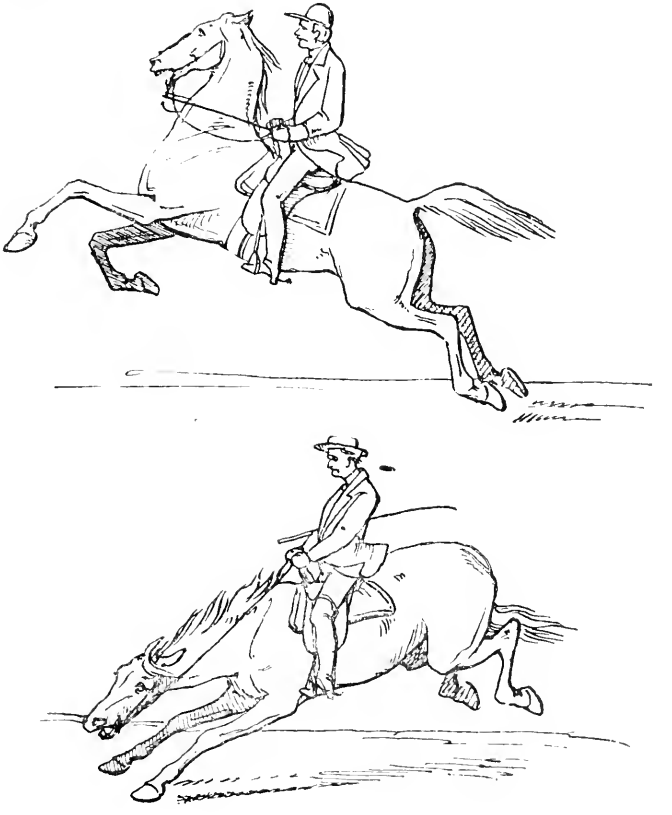
If circumstances permit the rider will do well to let the horse go for a short space, to get away from the object of his fear, at the same time speaking calmly to it and the horse may then be controlled again with moderate aids.

Otherwise, when this is not practicable the horse must be handled with firmness; if need be the aid of the spur must bring its hindhand under and the reins must be used in such a way, that they not only exercise their restraining influence upon the horse but also that the pain caused by their forcible application will distract the horses attention from the cause of the trouble.

A peculiar kind of runaway is the horse which runs away in anticipation of pain, when expected to halt or assume certain positions which after many hard experiences they know to be connected with more or less torture, as a rule they make their necks rigid in moments when they expect to be stopped and stretch their noses out so far as to bring their face line on a level with the neck and in this way weaken or annihilate the effect of a pull.

Others try to accomplish the same end by lowering and curving their neck so much that their mouth rests against the chest.

Not unfrequently such horses, instead of running, advance in lancades or plunges and in that way become doubly dangerous to the inexperienced rider..



Not always is it the mouth which they are afraid of having hurt; often it is the back or hind legs, especially the hocks the over-exertion and pain of which they dread

For the moment it is well to let them go a little but as a remedy it is advisable to search for the causes and to institute a method which gives back to the horse its confidence in the rider and alleviates pain.

Undoubtedly the worst kind of horses which run away are those who run away renitently. Animals which run away to avoid the demands of the rider opposing the latter and which are determined to carry out their own will. They have learned to assume positions of head and neck which entirely nullify the action of the reins, by forcing the hand, catching the bit etc., at which occasion twistings and contortions of the neck are resorted to by the horse.

In full possession of their senses and well able to stop or turn at any moment, they run into a crowd of other horses, around an obstacle or precipitate themselves upon the same or they run away homeward to their stable, following their moods by running, as balky horses follow their moods by stopping.

When such horses have become experts in this kind of vice they do not take the trouble to run away any longer but accomplish their object when they have the wrong kind of rider on their back in a trot or finally even in a walk.

The first kind of runaways which act from weakness, pain, or fear must be considered as momentarily irresponsible and any kind of punishment or running them against walls etc., must be considered cruelty. The latter kind are as hardened criminals, which must be reduced to submission by every mode of punishment.

They require cool and determined riders who through experience have learned to choose the deciding moment and understand how to meet the variety of opposition be it by complete release of the reins or the energetic use of the spur, with the hand at the same time firmly resisting; either by sudden turning with one rein, by vigorous use of the snaffle upward or finally by a decided jerk in the mouth.

The guiding of a horse against a wall or an obstacle is sometimes a successful correction.

It is however difficult to determine how soon the horse will be ready to stop or turn and the life of horse and man is therefore often at stake.

With such horses it is in some instances well to urge them to go a-new after they have tired and of them-selves begun to stop; but care must be taken, not to run them into pneumonia because they usually give up only after their breath has begun to fail them.

There are horses, which run away in a series of plunges; they are alternately pulling and behind the bit.

Usually they are animals with strength energy and an irritable temperament, which resort to this mode of freeing themselves after having been forced into painful positions and their patience has been sorely tempted.

They need very calm treatment and when they have gained confidence and stand well against the bit a very gradual remedy of the causes is commendable.

Everything that tends to excite them, must be carefully avoided.

Lecture VII.

CLUB RIDING.

One of the many ways of enjoying practical horsemanship, particularly during the winter season when temperature and condition of roads make outdoor riding an impossibility is the riding in clubs and to music.

As a rule the prime motive for organizing these clubs is the desire to give variety to the form of social grtherings in general in connection with, of course more or less real or imaginary love for horsemanship.

Sometimes a number of advanced riders are the originators of the idea and to facilitate the payment of dues and expenses of the club as well as from social considerations, friends are requested to join in the exercises regardless of talent or ability.

The desire of all these social organizations is to show their friends who visit the galleries of our Academies a certain degree of proficiency in the management of the horses consisting of a series of evolutions commonly called figures executed to the accompaniment of music, under the command of the Riding Master.

Those of the members who have attended dancing schools know that great precision is necessary in performing ordinary square dances, even on foot and will understand how much more their attention and skill is taxed where tournaments even of a simple kind are executed on horseback.

The mere pulling about of horses in turns of various descriptions is not only imperfect and unsightly to the onlooker but involves danger to both horse and rider as well as to the other participants in the manoeuvre.

Like children who do not know of the destructive powers of the elements with which they trifle, beginners who have no previous acquaintance with horses do not realize the peril of ignorance and carelessness on one side any more than they appreciate on the other hand the delight and pleasures derived from knowledge and capability. The duration of a season for the ring-rides of these Clubs comprise ten or twenty weeks or ten or twenty practical lessons at one evening in each week.

Considering the part of the hour which must be given up to rest and conversation the time appropriated for the achievement of the desired result is narrowed down to such an extent that only the united efforts of Pupils and Instructor can lead to success.

Most of these club riders if judged from the standpoint of a professional critic leave a great deal to be desired and unless social meeting and mutual entertainment without any regard for horsemanship are all these Club rides are expected to offer the members, I fail to see how the mere fact of fast riding and becoming heated can at length satisfy and give enjoyment to a club of intelligent men and women.

Tournaments, quadrilles, manoeuvres and evolutions which make upon every rider a demand of individual good horsemanship such as they have been and may now be seen from time to time in Europe, have

found in this country but a very imperfect imitation in exhibitions at Riding Academies, about the success of which columns may be read in our daily papers on the day following the event, but, which in many ways are but a burlesque of what might have been a most creditable performance, but for the lack of individual proficiency of the participants.

It must be admitted that the single numbers of the programme are usually of a nature to attract lovers of the equine sport of the most fastidious tastes, but a competent horseman will be sadly disappointed to see a number of horses with their riders rush through a quadrille without even an attempt to disguise the absolute lack of balance, collection, position, or flexion and the absence of uniformity of gait, tempo and cadence. A number of horses taking part in such a quadrille are seen to galop, some correctly, some falsely; others trot, and still others single foot. A part of the riders may be seen to sit their horses closely, others rising to the trot and the aspect of the whole frequently causes a competent spectator a feeling of anxiety for the safety of some of the riders who tear about at random, depending entirely upon the surefootedness of their horses and the safe condition of the ground.

Ignorant of the dangers which they incur, they run risks which no experienced horseman would expose himself to and as a mere matter of chance, escape falls and injuries; the very thought of which makes the looker on hold his breath and wonder why the list of accidents is not greater.

To give variety to these performances and to gratify his ambition to compete with and outdo others in the attractiveness of these evolutions, the most difficult and complicated figures are composed, and the pupils drilled indefatigably by the Riding Master, who will eventually succeed in executing the number creditably, as far as the lines of circles, turns, volts, etc. are concerned, and although the general public may be enraptured with the beauty of the figures and wonder at the possibility of their execution the riders have profited nothing and are likely to arrive at the conclusion, that they may now consider themselves masters and experts in the management of horses and that there is but little for them to learn.

But the purpose, which has originally caused masters of the art of riding to compose and arrange quadrilles, manoeuvres and games on horseback with a view of demonstrating the high training of the horse, the agility and proficiency of the rider in exacting from the horse all the grace, flexibility, suppleness, spring power, elasticity and strength which nature and training have given to it and the perfect harmony and understanding between horse and rider, which together with rythm, evenness and refinement of performance is so suggestive of poetry and music, have entirely been neglected simply because the training of the individual horseman or horsewoman has been superficial and imperfect.

Many clubs have to my knowledge existed for many years and for an equal number of years have they retained many of the original

members; they have also been led by one or more competent and industrious instructors, and still they go on, year after year, riding the same figures with more or less variations, but with the same absence of thorough horsemanship.

With pupils who have been made familiar with the principles of seat and guidance and who have the command of their horses fore and hindhand and can collect and balance the same, the very simplest of evolutions can be executed so as to be truly impressive and they may be most artistically adorned with the aid of lateral gaits.

The essential point remains however, in the careful execution of details and the uniformity and smoothness of the whole which give to the performance interest, distinction and practical value.

It seems to me that the constant repetition of figures of the same kind or in the same manner, would become monotonous; and it is not to be wondered at when men and women of more than ordinary intelligence make such ridiculous mistakes as to compare the bicycle to the saddle horse and take up the exercise on the former instead of the latter saying that riding in the ring is "slow and pokey."

There seems apparently nothing in horseback riding to employ their mind or stimulate their interest because they handle the horse as they handle the wheel, without thinking, and mechanically. I know of nothing which requires more constant exercise of thought and feeling, more judgment and discretion than the management of a sensitive, well trained horse.

If only the members of Riding Clubs would patiently wait with the planning of exhibitions until they have mastered the rudiments, and until they are sufficiently at home on horseback to give their attention to the refined execution of such intricate affairs as quadrilles etc., and be satisfied to show at the end of a season, not a great many things which they can not do, but a few well selected evolutions which they master to perfection.

I have heard women and men raise their voices in horror when this or that man of the profession administered a well deserved blow of the whip or sting with the spur to a horse, because they failed to recognize the necessity for such severity; but I have also seen the same persons look on with all evidence of interest and delight when young men who possessed of horsemanship only a firm seat and admirable courage, ill-treated for an hour or more a few worn out mustang ponies jerking their mouths until they bled and spurring and beating with mallets the exhausted and steam enveloped nags while they revelled, in what some people may term a most enjoyable game of Polo.

Games such as polo, football on horseback, Jeu de Barre and others, when ridden by skilled horsemen on horses well trained and, as required in some instances, well booted and protected against injury, are commendable enough; but when, as is often seen, they are played without any consideration for the horse they mar the refined aspect of a good entertainment and suggest that, which to eradicate should be the aim of every true horseman: brutality, coarsness and contemptible ignorance.

THE GALOP.

In speaking of this gait, I will deal merely with the galop as we find it in school and cross country riding. When correctly executed the galop is one of the most graceful and enjoyable gaits of the horse and deserves therefore our careful attention.

The galop consists of a series of leaps which to commence, the horse may be induced in different ways, with regard to its degree of training and the standard of perfection achieved by the rider.

To induce a crude horse, which is ignorant of the impressions of reins and legs to galop, is most easily accomplished by urging the horse into the desired gait out of a trot, at a moment, when a turn suggests the leading with either the right or the left legs.

Such horses "break" into a galop and are very apt to soon fall back into a trot because, from lack of balance, they are unable to carry themselves for a greater number of leaps in a galop.

The majority of hunters cause their mounts to galop by "driving" the latter into this gait with a one sided aid of the heel, and a lift with the reins upward which is responded to by the seasoned hunter with a more or less hasty departure in a galop.

From a stand-point of the horseman and the pupil who lays claim to a finished instruction in the art of riding, the horse must be literally "set" into a galop and the first leap be the result of a scale of aids, which are continued for as many leaps as the rider desires the horse to make.

The collection of the horse, which forms an indispensable basis and preparation for all evolutions and in all gaits, is necessary to a much greater extend for the galop.

If the horse is expected to leap and to continue to leap well balanced and light on the hand of the rider, the forehand must be discharged of weight by urging the hind legs forward under the centre of gravity of the horses body and by elevating the forehand and shifting its weight upon the horses haunches or, to express it more correctly, by shifting the hindhand forward and under the forehand and then elevating the latter upon the former.

Like on all other occasions the so balanced horse is under the control of the rider on the principle by which the largest and heaviest bodies become manageable and subject to the impressions of weaker bodies when they are properly balanced and pivoted.

We will next turn our attention to the position which must be given to the horse in order to compel it to galop either to the right or to the left, as the case may be, and for this purpose I refer to the lateral gaits spoken of in a previous lecture.

For the galop to the right the Travers to the right and for the galop to the left the Travers to the left are the positions which will insure a correct "setting in" at a galop on either hand.

It is of importance to maintain the collected condition of the horse throughout the galop in order to control the number of leaps intended.

Not only is the galop, one of the most majestic and graceful gaits when swingy and well collected, but the good condition of the forehand,

particularly the shoulders, knees and pastern joints and the muscles and tendons of the parts will be preserved by the maintenance of a higher equilibrium, while on the other hand they will suffer severely and give out prematurely by the galop upon the forehand. One way, the collected galop will increase the elasticity and spring of the horse's motion while the other way, the galop on the forehand, disunitedly and unbalanced, will deprive the horse of these advantages and make the gait for the rider unpleasant, hard and unsafe.

The necessity of leading with the right or left leg seems, judging from appearances not to receive the attention, which a matter of so great an importance should command.

The turning of a horse in the wrong galop aside from the unpleasantness and discomfort to the rider, involves the greatest danger, to both him and the horse, because of the liability of slipping and falling which exists, when the horse is deprived of the support of the inside legs, chiefly the inside hind leg.

I again mention at this instance the importance of a fine feeling which the rider must develope not only in his hands and legs but also in his seat in order to be able to feel without the ridiculous performance of leaning over and watching the horses legs, the raising and setting down of the latter and so distinguish whether the horse is galopping right, left or crosswise.

Lecture VIII.

WOMANS RIDING.

Although the records of equestrian sport are adorned with the names of famous horsewomen who are celebrated not only for their daring spirit in riding across country, but also for their knowledge of cultured horsemanship and proficiency in artistic riding, the generality of women who ride through the parks and over the public highways for health and exercise still need encouragement to study more deeply the elements of this beautiful art,

The natural grace, which is inborn to the representatives of the fair sex, follows them into the side saddle and the praise and admiration given them for the elegance of their seat and carriage on horseback, however well deserved, may lead many to believe that they have reached a stage of proficiency which, though it may give to them comfort and enjoyment, could, just then, be carried farther most successfully and make them the complete master over their horses which, after all, is of vital importance for their safety.

Talent, of course, is of itself an invaluable and speedy promoter of success; but talent alone without serious application to study and practice will not accomplish every thing and even those who are not by nature endowed with the characteristics of a good horsewoman may in time accomplish unlimited proficiency, by perseverance, and patience.

The constitution, temperament and energy of individuals vary to such an extent as to make it no easy task for the teacher to choose methods of instruction, and the mode of progressing with a pupil with whom he is not acquainted.

Nervous, sensitive and impatient pupils are easily discouraged and inclined to discontinue their efforts when, after a few lessons, they find themselves unable to overcome a certain awkwardness,

Their mind and physical efforts are concentrated upon their personal appearance; they are conscious of being observed and afraid of unfavorable criticism although the latter may be entirely imaginary.

Let the beginner understand that the accomplishments in the field of horsemanship are not to be mastered within any specified period of time, and having the control of their own body to consider as well as that of the horse, the only safe and certain road to success consists of the gradual and systematic learning and understanding of every detail concerning the seat and guidance.

The most complete relaxation of body and mind is necessary to enable the beginner to continue the introductory lessons without over exertion exhaustion, and to give the master undivided attention.

The balance of the body, the grip with the legs and the management of the reins are so entirely dependent upon the feeling of the horses motion and action, and the harmony in the distribution of the riders weight with the movements of the horse is so indispensable to lightness, firmness, elegance and correctness of the seat, that they demand absolute repose and ease as well as alertness and readiness for action.

It is therefore necessary that the beginner should know why systematic and thorough proceeding is preferable to superficiality and haste and also why this is more especially important while the rudiments are being discussed and practiced.

The position of a woman on horseback is of a nature, to show more perhaps, than any other, the great advantages which make her the masterpiece of creation, and it lies in the nature of horsemanship that the carriage of the rider should be commanding. The very position of a women in the saddle either betrays timidity and helplessness or it suggests at once the fact, that she is capable of controlling her horse.

The aim of parents, husbands, and guardians, as well as of the beginner herself should be, that she may become sufficiently advanced, to be able to act on the impulse of the moment and instinctively upon her horse in such a way as to insure her comfort and safety under all circumstances and if possible, without resorting to the assistance of other persons.

To make this possible, she must not only hear and remember, but thoroughly analyze and comprehend the causes and effects the reasons why, and the practical value of the means which are at her command to influence the horse and cause the latter to obey.

MOUNTING.

A womans horse, when saddled, bridled and ready for mounting should if possible be held at the head by the groom and the woman may then stand by the left side of the horse near the saddle flap, facing the horses head and place her right hand upon the pommel or upper horn of the saddle; the whip or crop is also to be carried in the right hand and pointed downward on the right side of the saddle. The left arm of the woman hangs leisurely by her side.

The assistant or teacher stands opposite the rider so closely that his left hand may be placed under the womans left foot when the latter is raised from the ground about a foot and a half, by bending the left knee. The assistants right hand is placed under the womans left armpit.

For the mounting of beginners it will be commendable to count "one, two, three" and when three is spoken, the woman will lightly spring from the right foot and ankle and rigidly straighten the left knee, thus giving the assistant an opportunity to raise her to the level or a little above the seat of the saddle and then turning slightly to the left, the rider will take her seat.

Next a womans right leg is assisted over the right horn by being supported with the escort's right hand under the foot while the left hand arranges the skirt to fit over the knee in the cut intended therefor and helping the skirt under the knee to fit smoothly over the pommel and leaping horn.

The stirrup is then placed under the left foot and by assisting the rider with the left hand under the left elbow to rise in the saddle, the skirt under the seat is pulled into position.

There are other methods of assisting a woman into the saddle; one of which consists of the woman placing her left foot into the folded hands

of the assistant while her left hand rests on his right shoulder from which she pushes herself upward as the assistant erects himself after stooping to receive her foot.

This method is quite generally used in Europe, but if the assistant should be very short and the horse and woman very tall the push from the formers shoulder would not add much to raising the woman into position and the lifting from the hands alone is no guarantee that the woman may not be raised so high and so far, to almost go over to the right after being seated in the saddle.

The womans seat in the saddle should be such as to place her hips and shoulders in a right angular position to the horses spine; the right knee or the thigh a little above the knee resting against the pommel with the lower part of the leg hanging downward over the saddle flap and the toe of the right foot pointed downward.

The left thigh rests closely against the saddle flap while the ball of the left foot holds the stirrup with the heel slightly depressed to prevent slipping of the foot into the stirrup. The position of the left foot should be parallel with the horse.

The adjustment of the stirrup as to its length, depends first upon the length of a woman's thigh from the hip to the knee, the latter acting as a lever in the act of rising, secondly, upon the stride and action of the horse in a trot, thirdly upon the weight of the rider which, if great, and the angle between the thigh and the lower leg very acute will fatigue because of the increased effort in straightening the leg for the rise.

The adjustment of the stirrups therefore may be most effectually attempted after the first trot, particularly, when the horse is a strange one and the woman is not acquainted with its gait.

The Riding Master of course who is familiar with these details may easily adjust a stirrup for the pupil by using his own judgment.

At all events it should be long enough to permit an almost complete straightening of the leg and at no time should the left leg be cramped under the leaping horn by too short a stirrup.

The woman's arms should rest against the sides of her body and the forearm be raised to about a right angle with the upper arm, when holding the reins.

The position of the hands should be close together; but their distance from the riders body depends entirely upon the carriage and position of the horse's head and neck and under all circumstances should the reins be held short enough to give sufficient purchase on the horse.

For the holding of the reins I refer to Lecture IV on "The Aids".

Gymnastic exercises, while halting on horseback, are an invaluable aid to give relaxation and suppleness to the beginners body and limbs.

In all cases where the time is not too limited, I insist on the use of the simple snaffle for the beginner until the hands have become independent enough of the horse's motion and are steady enough, to be entrusted with the curb.

The exercises of seat and guidance for woman's riding and the aids are the same, as in mans riding, but the whip in the woman's case

must take the place of the right leg.

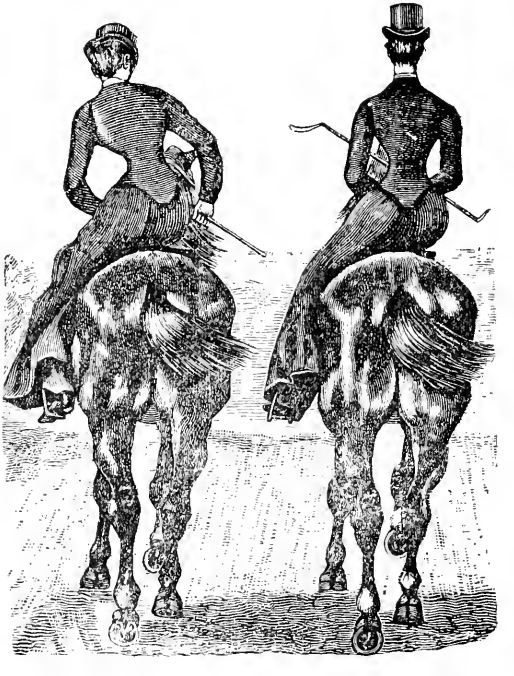
A matter which gives rise to great trouble and in many instances is accompanied by a hard struggle on the part of the beginner, is the rising of a woman to the trot.

To avoid the jolting caused by that gait and bouncing in the saddle and falling heavily on to the horses back; women should be taught to raise and lower themselves into the saddle in conformity with the strides of the horse.

In doing so the weight of the rider should be equally distributed over the right knee and the left foot in the stirrup and the springing motion should originate entirely from the regions about the woman's hips.

The right knee and lower leg and the left leg from the knee down should remain immovable, that is, the swinging of both, which is frequently seen with pupils of limited skill, must be avoided.

With many horses of a somewhat uneven gait it makes a decided difference whether the woman rises with the right or left leg of the horse and the beginner should learn to distinguish either, by feeling the difference, the moment she begins to rise. A mistake which is commonly made and sometimes adhered to, is the fact that women control their



INCORRECT. CORRECT.

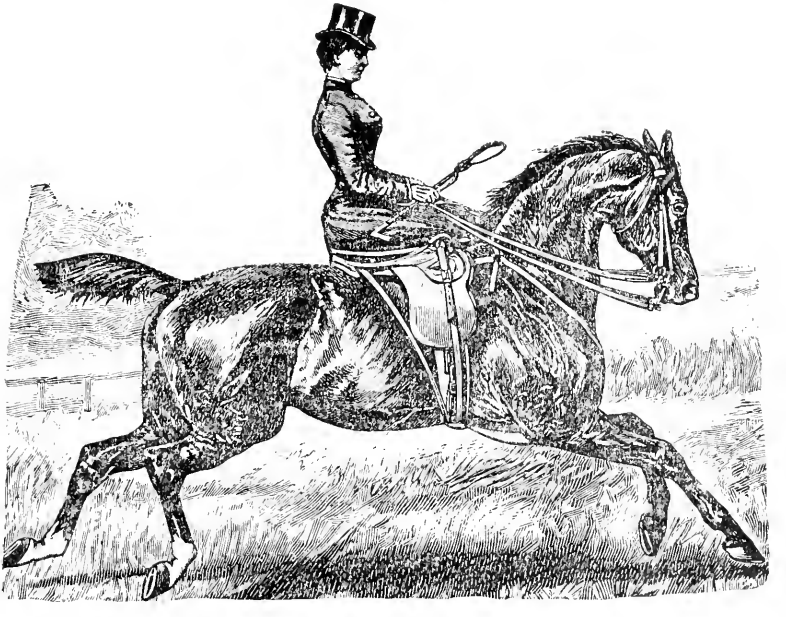
POSITION IN RISING TO THE TROT.

bodies in attempting to rise, by exerting themselves unnecessarily, instead of entering into the motion of the horse with perfect ease, they sit too far to the right with too short a stirrup, and then lean over to the left with head and shoulders, to be able to rise.

Another common mistake is the bending forward of most beginners as soon as the horse goes out of a walk, probably, to try and get a firmer grip, which is an idea of which the pupil will however soon undeceive her mind, when she finds that her security in the saddle is increased by adopting a reclining position.

In order to set a horse into a galop, the woman will, when on the right hand, place her horse in a Travers position to the right (see lecture on the galop and lateral gaits) and in place of her right leg she will apply the whip to the right shoulder of the horse.

For a galop to the left the Travers to the left gives the desired position and the whip is used behind the saddle flap on the right flank of the horse.



A GALOP.

Leaping over obstacles, both high and wide, is an accomplishment which, at least in a limited degree, should form part of a woman's practice in horseback riding.

It is a matter of course that women should ride only well trained, well behaved, and well mannered horses, and reliable, safe jumpers.

A fact which has more than anything to do with the successful taking of a jump is the firm determination, on the part of the rider to clear

the obstacle because the timidity and hesitation of the rider is strangely but with never failing certainly imparted to the horse, and the latter will almost invariably refuse if the riders heart does not proceed her over the jump.

The horse must be ridden quietly up to the jump at a right angle to the obstacle and given perfect freedom to measure the height or width of the latter.

In high jumping the woman will lean forward with the horse during the upward motion and then lean well back in the saddle.

During my experience in America, the question has frequently been put to me, whether women may not find more safety and comfort by adopting a mans seat.

Until recently I have never given the matter very serious consideration; having had no experience whatever of my own with women riding astride, I attempted to gather from men of the profession what information I could, so as to be able to answer intelligently any future questions by my pupils.

I found great difficulty in obtaining dispassionate views on the subject, particularly as to the Physiological standpoint in the matter and therefore issued the following circular to 500 Physicians of the City of New York.

ERNST CARL VON GILLMANN,

RIDING MASTER.

New York City, January 10, 1895.
128 West 56th Street.

DR._____

My purpose in taking the liberty to address you, Dear Sir, is to finally decide upon the merits of the question, which in ten years of my experience in America, has been put to me again and again: *Shall women ride on horseback astride or not; and why?*

I have inherited horsemanship; my grandfather, Baron Ernst von Gillmann was the master of the horse of H. R. H. the Grand Duke of Baden, and my father, Baron Emil von Gillmann for twenty years an officer of the German Cavalry, is about to celebrate the 25th anniversary of his directorship of the Ecole Cantonale d'Equitation in Bale, Switzerland, an institution of the old school, known to many residents of New York, where horsemanship is cultivated as a fine art to its highest perfection.

My own training from early childhood, in all branches of the art of riding and by eminent masters, my experience as a teacher, both in military service and in public academies, together with the reputation as a conscientious master, which I enjoy among my distinguished pupils, entitle me, I believe; to the modest assertion, that I am competent to form an opinion, as to the practicability and advisability of a woman's straddling her horse, except from a *Physiological point of view.*

The same question has been treated and argued, pro and contra in a way, at various times before; but I have never had an opportunity to

obtain a dispassionate and disinterested opinion from professional horsemen, because the majority of the latter are, I think, more or less prejudiced on the subject. I have arranged and begun to deliver at the reception rooms of the

DICKEL RIDING ACADEMY COMPANY.
124-126 West 5 th Street.,

a course of illustrated lectures on horsemanship, which took place on the Thursday nights of January 3, 10, 17, 24, 31, February 7, 14, 21, 28, and March 7, covering all phases of the art of riding.

The opening of these lectures was received with warm enthusiasm and they enjoyed the substantial support of a most select audience,

I have consented to devote the entire evening of January 31st to the discussion and eventual debate of the above problem, which involves the following questions:

Is there any reason, why the sense of propriety should hinder a woman from riding on horseback astride?

Is there any reason, why a costume, both elegant and modest in design and which reveals less of a woman's form, than the habit worn for the last years, should not be used by women when riding.?

Will it add to the comfort, ease, repose, relaxation and firmness in woman's seat on horseback and thereby increase endurance and facilitate the learning of horsemanship for women?

What is the opinion of competent and learned physicians as to the advisability of riding astride, from a physiological standpoint?

The last question is certainly the most important one and one in connection with which I do not profess to know anything. Most of my pupils, by a large majority have been women and are women and a large percentage of them have been advised by their physicians to cultivate riding on horseback for exercise and to benefit their health in general.

It now remains to be decided whether the seat astride, or the one in the side saddle is the one, which in regard to healthfulness is the most desirable.

In the interest of science and for the enlightenment of the thousands of women who ride daily, here and elsewhere I most respectfully and earnestly solicit your opinion on this subject, which, with your kind permission I would bring before my audience, together with that of many other medical men.

If you will give me the pleasure of your attendance on the evening of the lecture. January 31st 1895 I will gladly reserve your seat.

Thanking you very kindly in advance for your aid in solving what I consider an important problem, I remain, Dear Sir, most respectfully,

ERNST CARL VON GILLMANN.
Riding Master.

To this I received no answers speaking against women riding astride, and the following ones in favor of the innovation or rather the revival of an old custom.

"In reply to your letter in regard to women riding astride, there are things to be said both pro and con. From an anatomical standpoint especially in reference to the female organs, there can be no question in my mind that the best way and the one in which the organs retain their normal position is for the woman to ride astride. The trouble however is, that womens limbs especially from the hip to, the knee are shorter in proportion than the mans, and consequently the question arises, whether they can get a firm hold and seat on the horse. If this is the case then I should say most decidedly, that for a woman to ride astride is both the best, and most scientific way."

Signed
LEONARD P. RAU, M. D.
Chief of Division in operative
Gynecology, Post Graduate School and Hospital.
Attending Gynecologist, Montefiore Home.
Attending Physician, to New York Dispensary for diseases of women etc.
72 West 55th Street.

No Physiological Objection, a more desirable attitude.

Signed
E. L. PARTRIDGE M. D.
19 5th Avenue, New York.

In my judgment no injury would result to woman from riding astride on horseback. I deal, of course, only with the Anatomical and Physiological question involved in your inquiry, leaving to the community at large the consideration of the Aesthetic Aspect of the matter."

Respectfully yours
T. GAILLARD THOMAS, M. D.
600 Madison Avenue.

"Your letter, asking whether woman shall ride astride on horseback or not and why; has been received and read with great interest. In my opinion from a physiological point of view, it would be immeasurably better for women to ride astride. This position, on horse would, I think, render the exercise of much more benefit to women. The circulatory and muscular systems would receive the greater tonic effect from the riding in this symmetrical position.

From an aesthetic point of view I also favor this position, for certainly beautiful and picturesque costumes can be devised for such riding. I hope some of your distinguished pupils will test the new position, I am sure they will find it to their advantage and others will follow their good example.

Respectfully yours
Dr. SARAH A. FRENCH,
124 West 36th Street, New York.

"In favor of riding astride, all women should practice riding on both sides of the horse. Growing girls especially.

HENRY GRISWORD, M. D.
42 West 45th St., N. Y.

"In your circular letter of Jan. 10, you ask an interesting and important question viz: what is the opinion of Physicians as to the advisability of woman's riding astride from a physiological standpoint? While I would not presume to speak, with authority, I cannot believe there is any impropriety in a woman's riding astride, or any physiological reason for her not doing so in preference to the side saddle.

Yours Truly
O. B. DOUGLAS, M. D.
123 East 36th St., N. Y.
January 15, 1895.

Ernst Carl von Gillmann, Esq.,
128 West 56th St., New York.
Dear Sir:

In answer to your note of the 10th instant, I enclose a reprint of my paper on the subject of "Bicycling for Women," with the conclusions of which you may not agree, but in which you will find a number of facts that bear on your most interesting and important query to the physician. The paper was read at a full meeting of the Society, which contains more famous names and men noted as specialists on diseases of women, than any other in America with one exception; and among all the men who took part in the discussion of the paper there was only praise for the exercise and general agreement with my conclusions. At the same time, almost everything that has been said in the paper and in the discussion in favor of bicycling, applies equally well to horseback riding astride. You will see, therefore, that I believe women should not be hindered from riding as a man does, and that it would be both proper, modest, comfortable and safe, and that, in all these respects, it is infinitely to be preferred to the present position.

There is a vague and curious horror and lifting of hands among the aity, particularly among elderly spinsters, at the idea of any exercise with the thigh muscles, pelvic muscles or trunk muscles of women, or of any jolting of the pelvic contests, which would seem to indicate that the Great Anatomist had not known how to give them supports that could be efficient, and the possibility, if in right dress they took exercise, to properly develope these special parts of the body. The very fact that they often show weakness makes more evident the need for exercises properly directed and adjusted.

In one of the recent books on Athletic Work or Physical Culture, there are some interesting photographs of the actual skeleton doing various exercises; one of them represents the crouching position on the bicycle that men often assume; another shows, from the rear, the spinal otation and curvature produced by the ordinary woman's seat in the saddle. I would suggest that any establishment that does solar print-

ing could, for the sum of a couple of dollars, enlarge this last picture to a big wall chart, which would make one of your most effective points.

In conclusion let me say that I heartily congratulate you on having aken up so important a work.

Yours Truly,
ROBT. L. DICKINSON,

(Dictated.)

Mrs, Col. Morton, of Roseville, N. J.. says: "Being much interested in the topic now being so intelligently and widely discussed, may I kindly be permitted to give my personal views regarding 'which is the best way for woman to ride horseback?' I find from my own experience and that of my daughter, both being fond of the horse and the exercise of riding in the saddle, almost daily, that the use of the side-saddle for woman should be entirely relegated to the archives of the past, and the stride, or gentleman's saddle, absolutely adopted by all women riders, providing their health is of any consequence to them, this being, as I view it, the valued desideratum. Some of the most eminent medical doctors of England are now vigorously advocating the man's saddle, or striding the horse for women riders, and certainly this important fact should be favorably entertained, from a scientific point of view, if from no other, inasmuch as medical men's opinions regarding that which conduces most to our health should be considered authoritative at least.

"I find myself much improved in health, also my daughter, from having some time ago adopted the new departure and method of striding the horse. You can ride with better facility and unquestionably with greater safety. On the other hand, in riding in the sidesaddle, you not only contort the body to your great discomfort, injure your horse by afflicting too much weight upon his side, but you also, in case of an accident, should you fall or be thrown from the sidesaddle, jeopardize life by not being enabled to expeditiously extricate yourself from your side seat and stirrup, where, on the other hand, were you seated astride your horse and an accident were to occur, you have so much better an opportunity to command your horse and dismount, having so much better control of both limbs. I do not wish to be thought conceited in stating the fact, after having acquired the tuition of riding astride my horse, of being the first lady to introduce the same here in Roseville, N. J., on our beautiful suburban drives. I would sincerely and earnestly suggest to all women riders to adopt without delay riding astride the horse.

Roseville, N. J. MRS. COL. MORTON.

Personally I have no reason to advocate riding astride or to denounce the use of the side saddle particularly if women are properly taught and prevented from injuring themselves by rigid and unnatura position and unnecessary effort.

Lecture IX.

HIGHSCHOOL.

The training school for the horse may be compared to the gymnasium of man.

The untrained body of the animal may contain faculties the usefullness of which depends upon their development.

An animal may possess relative intelligence, that is, it may be susceptible to education and then become the interesting and lovable companion, as well as the useful friend and servant to man.

The development of the physique and the growth of the intellectual forces must go hand in hand.

Combined they give the results which stamp the training of the educated and scientific horseman a work of art, a production of brain worthy of the respect and admiration of his fellow men.

It lies in the instinct of man to control the elements, natural forces and raw materials and make them serviceable and refine them in science, art and the practical uses of life.

The training of the human voice, of the hand of the sculptor, painter are carefully conducted, the musician and the composer, the actor and the playwright, the engineer and mechanic, all in their own branches receive careful trainings; even jewels and precious metals are transformed from their crude stake into objects of brilliancy and purity for the enjoyment and benefit of man.

The horse, aside from its value for agricultural purposes and its use in war, has in my opinion a destination in art.

It is certainly the noblest of domestic animals and why should not its splendid faculties and ready understanding be developed? The art of riding to my mind and as conceived by me is one of the most beautiful arts.

It has over painting and sculpture, the advantage that its creations live and that besides the form and beauty, grace and majesty, which training has developed, the will of the horse is mastered

The disadvantage for the art of riding is, that with the life of the horse, the work of art is extinct and no canvas, marble or printed notes will deliver it to the after world.

The art of riding has much in common with music and the horse is in many instances to be compared to a musical instrument; it responds to the touch of the novice but it unfolds volumes of beauty and grace to the master. Its cords like those of the violin, the harp or the piano may be strained, sprung or put out of tune by the hand of the unskilled.

The widely read and popular novel by Du Maurier "Trilby" contains a comparison which appeals to me strongly as applicable to horsemanship.

Trilby had sung the simple melody of "Ben Bolt" in her artless, plain and unmusical way to the piano accompaniment, equally unskilled, of little Billee" when Svengali "put his big hands on the piano, over little Billee's, pushed him off the music stool with his great gaunt body, and

sitting on it himself, he played a masterly prelude.

It was impressive to hear the complicated richness and volume of the sounds he evoked after little Billee's gentle "tink-a-tink."

And Gecko, cuddling lovingly his violin and closing his upturned eyes, played that simple melody as it had probably never been played before—such passion, such pathos, such a tone—and they turned it and twisted it and went from one key to another, playing into each others hands, Svengali taking the lead; and fugued and canoned and counterpointed and battle doored and shuttlecocked it. high and low, soft and loud, in minor, in pizzicato and con sordino—adagio, andante, allegretto scherzo—and exhausted all its possibilities of beauty; till their susceptible audience of three was all but crazed with delight and wonder; and the masterful Ben Bolt and his over-tender Alice and his too submissive friend and his old schoolmaster, so kind and so true and his long dead schoolmates and the rustic porch and the mill and the slab of granite so gray,

"And the dear little nook
By the clear running brook"

Were all magnified into a strange, almost holy poetic dignity and splendor quite undreamed of by whoever wrote the words and music of that unsophisticated little song, which has touched so many simple British hearts that don't know any better—and among them, once, that of the present scribe—long, long ago!"

The masters of old have divided the gymnasium and the education of the horse in chapters, in degrees or in periods, beginning with the elements and systematically proceeding to the extent which the natural faculties of the horse, physically or intellectually, would permit.

In this way they created the school on the ground, the highschool and the school above the ground.

The high school performances up to date, are frequently distorted by too superficial treatment of the schools and evolutions which go to show the practical value of high school riding, and they are on the other hand amended by exhibitions of tricks which may do to, amuse the visitors of a country circus but have no relationship with the art of riding.

The circus should be and frequently is in Europe, a temple consecrated to the art of riding and horse training in its various branches, but in this country, high school riding in the circus is so far,but a shameful burlesque of the evolutions of which the performers of this particular branch often have not the faintest idea.

High school riding constitutes the classical part of equestrianism, and is to be held distinctly apart from trick riding.

No intelligent rider will fail to appreciate its value once he has arrived at a stage where he can understand its purpose.

The absence of general recognition of the high school in this country is due to the fact that the representative specimens of that class are horses, trained to perform as tricks the most striking paces and evolutions of these schools lacking entirely the fundamental basis of training and thus furnish no proof of any practical advantage of the high school.

Men from Kentucky may be seen to teach the horse the Spanish walk with spurs, attached to the toes of their shoes or with the whip alone, giving no attention to the principle of bringing about the elevation of the front legs and the forehand in general, by supporting it with the advanced hind legs and lowered haunches.

High school performances which are the result of systematic, thoughtful training and which in their perfect harmony between horse and rider and faultless execution of every detail, suggest poetry and music, and high school performances, which are but a mechanical imitation, a parody of the former, should not be mistaken for one another.

The last mentioned have upon the general public much the same influence as bad literature; they mislead the mind, prevent the true conception of really artistic eqitation and lower its ideals.

Just so long, as judges of high school riding at public horse shows, are satisfied with ostentatious productions of Spanish walk and tricks, giving little attention to purity of gait, evenness of cadence, fluency of tempo, correctness of position, pronounced flexion; elegance of seat, refinement and lightness of guidance and true collection and balance, just so long will the masters and performers of high school riding suffer from the competition of trick riders, who upon thorough examination, may be found ignorant of the very elements of the art of riding.

Lecture X.

POSITION OF A RIDING MASTER.

The position of a riding master, the art of riding as a profession, outside of the cavalry service, is an institution, which has come to this country from Europe.

The European courts, great and small, maintain large or small equerries, for the use of the members of the household and for the education in horsemanship of that leisure class, which is more or less closely in contact with the former, and which makes up the aristocracy.

The equerries are officers of the Royal household in the department of the Master of the Horse. They are men of breeding and culture, selected from among the officers of the army, whose great talent and ability in equestrianism fits them for their position and who make the art of riding scientifically and practically the study of their lives.

The best of material in the way of horses and pupils, unlimited time and exclusive devotion to the one subject, has enabled such men to produce phenomenal results.

Many of the smaller Courts have been reduced to all but a title, and the maintenance of extensive studs and schools of equitation has become beyond their means.

Public establishments have taken their places in many instances, and are conducted as business enterprises.

Competition, which is considered the life of trade, has had upon such institutions a destructive influence. The professional horseman is compelled to yield to business principles and must sacrifice much of his individuality.

Men, who, true to their aim of life and the chosen profession continued in the old school, are outranked by those who owe their success to the flexibility of their character and who understand how to cater to the weakness and vanity of human nature.

The criticism of such men, who build their prosperity upon the ruins of the beautiful art which they aid in destroying, was never better commented upon than by George Du Maurier, who says: "Up rises the printed howl of the duffer, the disappointed one, the wounded thing with an angry cry the prosperous and happy bagman that should have been, who, has given up all for art and can't paint and make himself a name, after all and never will, so falls to writing about those who can—and what writing! To write in hissing dispraise of our more successful fellow craftsman and of those who admire him! That is not a clean or pretty trade. It seems, alas! an easy one, and it gives pleasure to so many. It does not even want good grammar. But it pays, well enough even to start and run a magazine with, instead of scholarship, taste and talent! humor, sense, wit and wisdom! it is something like the purveying of pornographic pictures; some of us look at them and laugh and even buy. To be a purchaser is bad enough; but to be purveyor thereof—ugh!

The poor devil of a cracked soprano (are there such people still?) who has been turned out of the Pope's choir because he can't sing a tune, after all! think of him yelling and squeaking his treble rage at Santley, Sims Reeves, Lablache! poor, lost, beardless, nondescript! why not fly to other climes, where at least thou might'st hide from us thy woeful crack, and keep thy miserable secret to thyself! are there no harems still left in Stamboul for the likes of thee to sweep and clean, no womens beds to make and doors and windows to bar and tales to carry, and the Pasha's confidence and favor and protection to win? Even that is a better trade than pandering for higher to the basest instincts of all the dirty pleasure some feel in seeing mud and dead cats and rotten eggs flung at those we cannot but admire—and secretly envy.

Few people stop to think, that it requires years of earnest study and hard work, theoretical and practical, to gain that knowledge which fits one to impart to others, the theories of the art of riding, uniformly and intelligently.

Long experience only and intimate acquaintance with the thousand and one peculiarities both of pupils and horses, enable one to adopt a system and method, by which in the shortest possible time horse and rider can be practically educated with success.

It is to be desired, that pupils should find in their master a man whose social position and education make their relations agreeable and pleasant.

The hours of duty are long and the work sometimes laborious and not without dangers.

I sincerely hope, that in time, not far off, our competent horsemen in America will succeed in giving the Art of riding a distinction and recognition which it enjoys among the educated in Europe, and thereby make our position what it should be: respected, appreciated, and adequately compensated.

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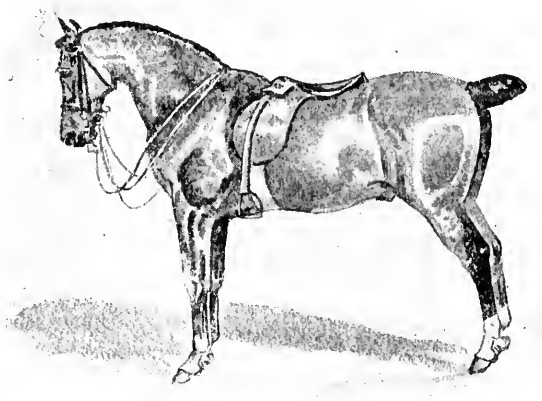

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